DOCUMENT RESUME

ED 179 552 TM 009 635

AUTHOR	Clarke, S. C. T.: And Others
TITLE	Alberta Grade III Achievement Study. Fall 1978.
INSTITUTION	Alberta Dept. of Education, Edmonton. Minister's Advisory Committee on Student Achievement.
SPONS AGENCY	Alberta Dept. of Education, Edmonton. Planning and Research Branch.
PUB DATE	78
NOTE	82p.
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Academic Achievement: Achievement Tests: Age: Arithmetic: Basic Skills: Cognitive Ability: Educational Assessment: Educational Trends: Foreign Countries: *Grade 3: Language Arts: Primary Education: Reading Achievement: Rural Urban Differences: State Surveys: *Test Results
IDENTIFIERS	*Alberta: California Achievement Tests: California Test of Mental Maturity: Gates MacGinitie Reading Tests

ABSTRACT

As a companion project to the Edmonton Grade III Achievement: 1956-1977 Comparisons, this study had two purposes: to establish benchmarks of basic skills achievement and to compare the achievement of various subgroups. Third grade students in Alberta were administered the Gates MacGinitie Reading Tests--Vocabulary and Comprehension, and the California Achievement Tests--Reading, Mathematics, and Language. Comparisons were made between Edmonton students and the rest of the province. In the newer editions of the tests, provence-wide results showed mean scores significantly higher than Edmonton results except on two California mathematics tests. Mean scores for the two groups on the 1963 edition of the California Test of Mental Maturity were not significantly different. Results also indicated that non-urban schools performed better than urban schools. Achievement in Edmonton was determined to be on a par with achievement in metropolitan areas. Based on test results from a 1956 study, it was concluded that standards in reading and language had risen substantially over the years. (MH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED179552

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Alberta Grade III Achievement Study

FALL 1978

TM009 635

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
W. P. Eddy
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Alberta

The Minister's Advisory Committee on Student Achievement

ALBERTA GRADE III ACHIEVEMENT STUDY

by

S.C.T. Clarke, V. Nyberg, W. H. Worth

A STUDY COMMISSIONED BY

THE MINISTER'S ADVISORY COMMITTEE ON STUDENT ACHIEVEMENT

(MACOSA)

FUNDED AND ADMINISTERED BY THE PLANNING AND RESEARCH BRANCH

ALBERTA EDUCATION

FALL, 1978

ALBERTA GRADE III ACHIEVEMENT STUDY

A Study Conducted for

The Alberta Advisory Committee on Educational Studies

by

S. C. T. Clarke, V. Nyberg, W. H. Worth

The University of Alberta

Under Contract to Alberta Education, Edmonton, Alberta, Canada

Commissioned by

The Minister's Advisory Committee on Student Achievement

Based on

Data Collected in Late May, and Early June, 1977

ADVISORY COMMITTEE

J. Anderson	Alberta School Trustees' Association
W. Brooks	Alberta Teachers' Association
A. Myhre	Conference of Alberta School Superintendents
H. C. Rhodes	Alberta Education (Chairman)
H. Sherk	Alberta Education

ALBERTA GRADE III ACHIEVEMENT STUDY

FOREWORD

This study was considered in the spring of 1977 by the Minister's Advisory Committee on Student Achievement and was recommended to the Minister of Education, the Honorable Julian Koziak, for support. It was funded and administered through the Planning and Research Branch, Department of Education. The study was conducted for the Minister's Advisory Committee through a contract with the Alberta Advisory Committee for Educational Studies by S. C. T. Clarke, V. Nyberg, and W. H. Worth of The University of Alberta.

Public concern about standards of school achievement, and a generally shared concern about the need for benchmarks of pupil performance, were background to the decisions which culminated in this study. It was decided to establish norms of performance in the basic skills at the end of Grade III. This school level was chosen first of all because criteria are needed for the early grades. A second reason was that as early as 1956 the Alberta Advisory Committee on Education Studies had endeavored to institute province-wide norms of achievement. It was fitting that this 1977 study should be linked, insofar as possible, to these earlier studies and also to a comparison study Edmonton Grade III Achievement: 1956-1977 Comparisons.

The two major purposes for the study were: to provide benchmarks of performance in reading, mathematics, and language insofar as such performance was measured by the tests used; and, to compare 1977 performance by inference with the norms of students at earlier times. A ten percent sample of Alberta schools with Grade III students was tested with modern versions of tests first administered on a widespread scale in 1956, and some of these students were also given the original versions.

The benchmarks provided can be used in future studies to compare achievement in the three Rs. This, and the inferential comparisons about Grade III achievement will, it is hoped, repay the time and effort of the students, teachers, and others involved in the study.

S. C. T. Clarke
V. Nyberg
W. H. Worth

ALBERTA GRADE III ACHIEVEMENT STUDY

ACKNOWLEDGMENTS

Without the willing cooperation of many individuals, this study would not have been possible. Appreciation is expressed for the permission to approach the schools in their administrative units granted by the 50 superintendents listed in the Report. The principals and teachers of the participating schools are particularly thanked for the time and effort they devoted to the testing program and to the administration of the tests. Acknowledgment is also made of the thousands of student hours involved in taking the tests. The involvement of all of these persons made the study possible.

Advice on sampling procedures was provided by Steve Hunka and Tom Maguire of the Division of Educational Research Services. J. R. Reid of Alberta Education provided the lists of schools with Grade III students in four different codes. From this list, the sample and alternates were chosen. Samples of Edmonton Schools were selected by Anne Mulgrew of the central staff of the Edmonton Public System. The assistance of these persons in securing the sample is gratefully acknowledged.

From the outset, encouragement was given by officials of the Department of Education, particularly Wm. Duke, J. Reid, and H. Sherk. The research grant through the Planning and Research Branch, Department of Education, and its receipt by the Alberta Advisory Committee on Educational Studies is gratefully acknowledged. A special note of appreciation is expressed to the members of the advisory committee named on the title page for their valuable suggestions and advice.

The contribution of the Faculty of Education in providing storage and working space, and particularly that of Dean W. H. Worth, is deeply appreciated.

Special mention must be made of the part played by David Blackmore who performed most of the tasks in the preparation and analysis of the data. His work was at the heart of the study, and is acknowledged with appreciation. Appreciation is also expressed to Alberta Stallybrass for her conscientious work in preparing the manuscript.

ALBERTA GRADE III ACHIEVEMENT STUDY

TABLE OF CONTENTS

		Page
Foreword		i
Acknowledgments		ii
List of Tables		v
CHAPTER I	Overview and Summary	1
CHAPTER II	Introduction	4
CHAPTER III	Age of Students	12
CHAPTER IV	Reading	13
CHAPTER V	Mathematics	18
CHAPTER VI	Language	21
CHAPTER VII	Mental Maturity	24
CHAPTER VIII	Metropolitan and Non-Urban Comparisons	26
CHAPTER IX	Results and Discussion	29
References		33
APPENDIX 1	Letter to Superintendents Associated with Participating Schools.	34
APPENDIX 2	List of Superintendents Participating in the Study.	37
APPENDIX 3	Letter to Principals of Participating Schools.	43
APPENDIX 4	List of Schools (Excepting Edmonton Public Schools).	45
APPENDIX 5	Information for Principals and Teachers: Schools Group 1.	54
APPENDIX 6	Information for Principals and Teachers: Schools Group 2.	56

TABLE OF CONTENTS (continued)

		Page
APPENDIX 7	Information for Principals and Teachers: Schools Group 3.	58
APPENDIX 8	Information for Principals and Teachers: Schools Group 4.	60
APPENDIX 9	Letter to Principals and Teachers of Grade III Students.	62
APPENDIX 10	Edmonton Grade III Achievement: 1956 - 1977 Comparisons Abstract	63
APPENDIX 11	Alberta Grade III Achievement Norms	65

LIST OF TABLES

		Page
TABLE 1	Means and Standard Deviations of Samples on the California Short-Form Test of Mental Maturity (1953 edition).	8
TABLE 2	Representativeness of Sample, Province Less Edmonton Public Schools.	9
TABLE 3	Average Age of Students in Months.	12
TABLE 4	Reading: Gates MacGinitie Test (1964 edition).	14
TABLE 5	California Achievement Test - Reading (1970 edition).	15
TABLE 6	Gates Tests (1942 edition).	16
TABLE 7	California Achievement Test - Reading (1950 edition).	17
TABLE 8	California Achievement Test - Arithmetic (1970 edition).	19
TABLE 9	California Achievement Test - Arithmetic (1950 edition).	20
TABLE 10	California Achievement Test - Language (1970 edition).	22
TABLE 11	California Achievement Test - Language (1950 edition).	23
TABLE 12	California Short-Form Mental Maturity Level 1H (1963 edition).	24
TABLE 13	California Short-Form Test of Mental Maturity (1953 edition).	25
TABLE 14	Metropolitan and Non-Urban Comparisons	27
TABLE 15	Achievement Benchmarks for Alberta	29
TABLE 16	Grade Equivalent Scores Test Means	31

CHAPTER I

OVERVIEW AND SUMMARY

The Alberta Grade III Achievement study was carried out primarily to establish benchmarks of achievement in the basic skills at the Grade III level in Alberta. A secondary purpose was to enable some comparisons to be made between different subgroups. The project was a companion study to the Edmonton Grade III Achievement: 1956-1977 Comparisons study (Clarke, Nyberg, and Worth, 1977, and 1978).

Two distinct sets of tests were used. One set consisted of the instruments used in 1956 in a study of Grade III achievement in Edmonton. The following tests were involved:

> Gates Advanced Primary Reading Tests, Form I, 1942 edition, consisting of two subtests, Word Recognition and Paragraph Reading.
>
> California Achievement Tests Complete Battery, Primary Grades 1, 2, 3, and 4, 1950 edition, consisting of three tests, Reading (3 subtests), Mathematics (6 subtests), and Language (5 subtests).
>
> California Short-Form Test of Mental Maturity, Primary Grades 1, 2, and 3, 1953 edition.

The second set of tests consisted of later editions of the Gates test (Gates MacGinitie, 1964), the California Achievement Battery (1970), and the California Short-Form Test of Mental Maturity (1962).

In the parent study all Grade III students in Edmonton (approximately 4500) were given the old versions of the tests. So as not to burden the students too heavily with tests, a system of matrix sampling was used whereby all students in Edmonton spent about the same time writing tests. Four samples, each with approximately 460 students, wrote new versions of the test instead of one of the ability tests. In the remainder of the province a ten percent sample of classrooms was selected involving about 2700 students, with measures taken to get representation from Edmonton and Calgary, other cities, divisions and counties, and independent districts. As a result it was possible to administer tests, both old and new versions, to representative samples of Alberta Grade III students. The initial request for participation was sent to 93 schools of

which 86 agreed to participate. Six alternates were chosen, and all agreed to take part. One school was dropped from the sample without substitution because it happened to contain no Grade III students in the 1976-77 year.

The tests were administered in May and early June 1977. The processing, which followed, involved scoring, coding, keypunching the data which were then stored on magnetic tape, and analysis by computer.

Findings

Benchmarks for achievement were determined for the newer editions of the Gates MacGinitie Reading tests and the California Achievement Battery. No benchmarks were calculated for the older versions of the tests because these were intended for the purpose of making comparisons only. The benchmarks obtained are summarized in Table 15, page 29. The mean scores were: Gates MacGinitie Reading-Vocabulary 37.68, and Comprehension 33.08; California Achievement Reading 72.09, Mathematics 96.92, and Language 90.69.

Comparisons were made between Edmonton Public System students and the Province Less Edmonton Public System. The results revealed some differences as well as similarities. The Edmonton Public School students were younger by 0.85 months. In the newer editions of the tests, the Province Less Edmonton Public System had mean scores significantly higher in the Gates MacGinitie vocabulary test and the comprehension test, the California Reading Comprehension test, the California Language Capitalization test, and the California Language Total Test. Grade III students in the Edmonton Public System scored significantly higher in the California Mathematics Concepts and Problems test and in the California Mathematics Total Test. The mean scores did not differ significantly in the following tests:

California Reading - vocabulary
California Reading - total test
California Mathematics - computation
California Language - placement of punctuation
California Language - punctuation mark missing
California Language - usage and structure
California Language - spelling

In the older versions of the tests, the 1956 Edmonton Public System means were significantly lower than means for the other two groups in Gates Word Recognition, California Reading and California Language. They scored significantly lower than the Edmonton Public 1977 group, only, in Gates Paragraph Reading, but they were significantly higher in the mathematics subscores and total score. With respect to the two 1977 samples, the Edmonton Public System's means were significantly higher in the Gates Word Recognition, Gates Paragraph Reading, California Reading, California Language - Spelling,

and Mathematics except for Computation where there was no significant difference. The Province Less Edmonton Public System did not score significantly higher in any of the tests.

Mean scores for the two groups on the newer (1963) edition of the California Test of Mental Maturity were not significantly different, but it must be borne in mind that the Edmonton Public students averaged almost a month younger than the Province Less Edmonton Public groups. On the older (1953) version of the California Test of Mental Maturity the mean for the Edmonton Public 1977 group was significantly higher than the Province Less Edmonton Public mean which in turn was significantly higher than the mean for the 1956 Edmonton Public group.

Comparisons of the scores achieved by Grade III students in Alberta with norms recorded by the publishers of the tests led to some interesting conclusions. In 1956 the Edmonton Public System students averaged well above the publishers' means in all subjects. In 1977 the grade equivalents of the means were generally as high or higher than the 1956 values, indicating that standards in Edmonton remained high. Even in arithmetic, where means were lower in 1977, the values were still well above American norms.

Findings with respect to achievement in non-urban schools were surprising. In the 1950s* students in urban schools typically outperformed those in non-urban schools. In 1977 the difference seemed to be in the other direction; that is, the differences tended to be in favour of the non-urban group.

A quick comparison between the results of the Alberta study and the Edmonton Study** reveals that achievement in Edmonton is about the same as achievement in the metropolitan systems combined. Since Edmonton Public Grade III students scored better overall in 1977 than they did in 1956, and since Edmonton Public students were approximately on a par with the other metropolitan students in the province, and since the non-urban students were as good as or better than the metropolitan students, it follows that there has been a considerable improvement in the province, generally, from 1956 to 1977. In addition, it should not be forgotten that Grade III students in 1977 were, on the average, younger than their counterparts in 1956.

---

* Carmichael, Anne, and Rees, Robert E. A Survey of Reading Achievement in Alberta Schools. Alberta Journal of Educational Research, 1, No. 1, 1955, pp. 18-33.

** Clarke, S. C. T., Nyberg, V., and Worth, W. H. Edmonton Grade III Achievement Study: 1956-1977 Comparisons. Edmonton: Alberta Education, 1977.

CHAPTER II

INTRODUCTION

Origin of the Study

The present study was a companion to the Edmonton Grade III Achievement: 1956-1977 Comparisons study. The Alberta study used the latest versions of the achievement and ability tests originally used in 1956 in the Edmonton Achievement Study. Thus, the two studies, one based on the total population of Grade III students on the Edmonton Public Schools and the other based on a ten percent sample of all Grade III students, would be complementary.

The background factors in the two studies were the same: public concern about school achievement, and public statements that school achievement was in a parlous state. This concern, and these pronouncements, were not confined to the province of Alberta. They were part of the temper of the times across Canada, in other parts of the North American continent, and elsewhere. Evidence of public concern was shown in government action. Late in 1976, a Minister's Advisory Committee on Student Achievement was established. It was this committee which considered the present study and recommended it to the Minister of Education.

Purpose of the Study

The primary purpose of the study was to establish benchmarks of achievement in some of the basic skills of Grade III students in Alberta. A secondary purpose was to make possible a number of comparisons of achievement between subgroups of students from different geographical areas and different time frames. Both purposes required that a representative sample of students take the latest version of certain tests of achievement and ability, while the second purpose called for some students taking original versions of the same tests, in order to link achievement at different times and places.

Design

In 1956, about the end of May, every pupil in Grade III in the Edmonton Public Schools was given a number of tests. Essentially, these were the following: A_o original version, Gates Reading (two booklets); B_o original version of California Reading and Language; C_o original version of California Arithmetic (B_o and

C_o were in one test booklet, the California Achievement Battery); D_o original version of the California Mental Maturity test. There is a later version of each of these tests, A_L, B_L, C_L, D_L. In the Alberta Grade III Achievement Study, these latest versions of the tests plus one unit of the original versions were administered to a province-wide ten percent sample of Grade III students to establish the benchmarks and the linkage required. Because all of the students in the Edmonton Public School system were being tested, the design differed from that used for the rest of the province, where a sample only, was tested.

The test design is charted below, where Group 1 in the Edmonton Public Schools was a ten percent representative sample of the 4700 Grade III pupils in that system, Group 2 was another (different) ten percent representative sample, and so on. Group 1 in the rest of the province was a twenty-five percent representative sample of the 2700 Grade III pupils, Group 2 was another (different) twenty-five percent representative sample, and so on. There was a group 5 in the Edmonton Public Schools which need not concern us, because it was not part of the provincial sample.

	EDMONTON PUBLIC SCHOOLS (All Gr. III pupils, 4700)					REST OF PROVINCE (A 10% rep. sample of Gr. III pupils, 2700)				
Group 1	A_o	B_o	C_o	A_L	D_o	A_L	B_L	C_L	A_o	D_L
Group 2	A_o	B_o	C_o	B_L	D_o	A_L	B_L	C_L	B_o	D_L
Group 3	A_o	B_o	C_o	C_L	D_o	A_L	B_L	C_L	C_o	D_L
Group 4	A_o	B_o	C_o	D_L	D_o	A_L	B_L	C_L	D_o	D_L

The design provided for province-wide benchmarks and a tie-in to the Edmonton Grade III Achievement 1956-1977 Comparisons study. Each of the test units required approximately 40-50 minutes. In order to parallel the procedures used in the Edmonton Public Schools' study, teachers administered the achievement tests but not the ability tests. The principal or his designee (other than the teacher of Grade III students) was asked to administer the ability tests. All testing was scheduled in the period May 18 - June 1. All of the tests were marked at the university. Teachers were asked to indicate any items on the achievement tests which they deemed inappropriate, with reasons.

General Description of Sample

The sample unit was the school. A list of all schools which included Grade III students (Schools of K-6, K-9, K-12 grade ranges) was provided by J. R. Reid of the Department of Education. The schools were arranged in four groups (called codes): Code 1

was Edmonton and Calgary; Code 2 was Other Cities; Code 3 was Divisions and Counties; and Code 4 was Independent Districts. Within each code, the schools were arranged in order of size, from small to large.

In Code 1, the schools were also arranged in order of size by district: Edmonton Separate, Calgary Public, and Calgary Separate. The schools were numbered according to the ordering by size.

Except for schools in the Edmonton Public System, a ten percent sample was secured by randomly selecting a number from one to ten, and then selecting every tenth school. For example, the number two was drawn for Code 1, Edmonton Separate, so the second, twelfth, twenty-second schools, and so on, were selected. This procedure ensured geographic representation (by codes), size representation (schools in each code were arranged in order of size), and the required representative ten percent sample.

All Grade III students in a school were tested. In the event a school could not or would not participate, the next school (alternating from the preceding to the following school if more than one was found to be non-participating) was approached.

One school in Code 3 was closed. In two others, the superintendent indicated that students entered in Grade I not speaking English, so he asked that these schools not be approached. One superintendent declined to have a school approached, because the unit had just completed a heavy testing program. One, and only one, school refused to participate "because they would get nothing out of participation." In each of these five instances, an alternative school was used. In addition, one school in Code 3 had no Grade III students. In this case, no alternate was chosen.

In Code 1, one school declined to participate because the Grade III teacher would be absent on extended sick leave. The alternate school was used.

Of 93 schools originally approached, 86 agreed to participate, six alternates were selected, and one school was dropped from the sample, leaving 92, exclusive of Edmonton Public Schools, as participants. See Appendix 4 for the list of participating schools.

Within each code, and for each of the large systems (Edmonton Separate, Calgary Public, Calgary Separate), a number from 1 to 4 was chosen randomly and the groups were assigned serially from that starting point. A glance at Appendix 4 will reveal the system used.

A matrix system of sampling was used in the Edmonton Public Schools. Because every student was already scheduled for testing, it was decided to eliminate one test (the Raven Progressive Matrices) from each of four ten-percent samples and in its place

administer the latest versions of the achievement and ability tests as charted under the section in Design. The samples were selected by the Edmonton Public System so that ability levels were approximately equal. For details, see the report on the Edmonton Grade III Achievement: 1956-1977 Comparisons study.

A perusal of the test design should make clear that there is no one sample involved. Thus, results for the Gates MacGinitie Reading test are derived from E.P.S. Group 1 and the Province Less E.P.S.; results for the California Achievement test (1970 version) in reading and language are based on E.P.S. Group 2 and the Province Less E.P.S.; for the California Achievement test (1970 version) in arithmetic on E.P.S. Group 3 and the Province Less E.P.S.; and for the California Test of Mental Maturity (1962 version) on E.P.S. Group 4 and the Province Less E.P.S. Similarly, for the original tests, the results for Gates Word Recognition and Gates Paragraph Reading (1942 version) are based on all of E.P.S. and Group 1 of the Province Less E.P.S.; and so on. In all, eight different samples were used, the first four to establish provincial benchmarks on the tests named above, and the last four to make comparisons between results on the original versions of these tests. The first four had a common element, viz. a 10% sample of all of the Grade III students in the province less those enrolled in the Edmonton Public School System (Province Less E.P.S.). The last four had a very large common element, viz., all of the Grade III students in the Edmonton Public School System.

Samples from the Edmonton Public School System

It was noted earlier that four ten-percent samples were drawn from the 1977 population of grade three pupils in the Edmonton Public System. This task was delegated to the office of Pupil Assessment of the Edmonton Public School System when it was learned that this office had developed a procedure for drawing samples whose characteristics would closely resemble those of the parent population.

The selection procedure consisted of choosing a school at random, then finding three others whose pupils had similar characteristics and assigning them to the three other samples. Comparisons were made on the basis of two tests: the Canadian Cognitive Abilities Test, and a reading test developed by the Edmonton System. The Cognitive Abilities test, given to the grade three pupils early in the 1976-77 school year, produced three scores: Verbal, Non-verbal, and Quantitative. The reading test was administered in 1976 when the pupils were completing grade two. Each set of four schools consisted of a group whose means on the test scores were matched as nearly as possible. If more than four schools had highly similar test means, other characteristics such as geographical location were considered.

It was possible to check, at least to some extent, the effectiveness of the sampling procedures by comparing means and standard deviations of the various subgroups on the California Test of Mental Maturity. Table 1 gives the figures for the four samples drawn and for the remaining 60% of the population. While some of the differences between pairs of groups are statistically significant, the actual numbers themselves differ by very little.

Table 1

Means and Standard Deviations of Samples on the California Short-Form Test of Mental Maturity (1953 edition)

Sample	N	Mean	S.D.
Group 1	456	80.23	6.80
Group 2	454	79.12	7.37
Group 3	431	80.94	6.71
Group 4	446	81.20	6.36
Remaining 60%	2591	79.94	6.96

Sample from Province Less Edmonton Public School System

The representativeness of any sample can be assessed in a number of ways, if comparable data on the total population are available. In terms of the four groups or codes from which the sample was drawn, only student enrollment was available. Even these data were not strictly comparable because those supplied by the Department of Education were obtained in September 1976 and the actual school enrollment of Grade III students who participated in the study was obtained in May 1977. In general, enrollment was increasing gradually at the Grade III level, particularly around urban centres.

Table 2 sets forth the comparative data which were available. It will be recalled that a 10% sample was sought from all districts except Edmonton Public. The total number of Grade III students in all schools (except Edmonton Public) according to Department of Education figures was 26,427 as of September, 1976. As shown in Table 2, a 10% sample would call for 2,643 students. The schools claimed an enrollment of 2,711, and in fact, 2,705 students participated.

It will be noted that the three large districts from Code 1 were over-represented in the sample by 15%. It is likely that

this occurred by chance selection of schools with enrollments larger than average. Where more schools were involved, in Code 3 (Divisions and Counties), the sample numbers were much closer to target. In general, large cities were over-represented in the sample, other cities and independents were under-represented, while the representation of Divisions and Counties was very close.

Table 2

Representativeness of Sample, Province Less E.P.S.

Jurisdiction	Actual Grade III Enrollment	Sample Target	Sample Actual	Difference No.	Difference %
Code 1					
Calgary Public	6529	653	748	+95	+15
Calgary Separate	1202	120	147	+27	+23
Edmonton Separate	1861	186	206	+20	+11
Total, less E.P.S.	9592	959	1101	+142	+15
Code 2					
Other Cities	2303	230	201	-19	-10
Code 3					
Divisions and Counties	11457	1146	1132	-14	- 1
Code 4					
Independents	3075	308	277	-31	-10
Totals, Codes 1-4	26,427	2,643	2,711	+68	+ 3

It had been hoped to check the representativeness of the sample in other ways, such as by numbers of teachers, but the data were not available.

Tests Used

In connection with the Edmonton study, permission had been secured to reprint all of the tests which had been used in the 1956 study and which were out of print. In the present study, the following reprints were used:

California Achievement Tests Complete Battery Primary Grades 1, 2, 3, and 4. Form CC Reading, Arithmetic, Language. Devised by Ernest W. Tiegs and Willis W. Clark. Published by California Test Bureau, 5916 Hollywood Blvd., Los Angeles 28. Copyright 1950.

California Short-Form Test of Mental Maturity Primary Grades 1, 2, and 3, 1953 S-Form. Devised by Elizabeth T. Sullivan, Willis W. Clark, and Ernest W. Tiegs. Published by California Test Bureau, 5916 Hollywood Blvd., Los Angeles 28. Copyright 1953.

Gates Advanced Primary Reading Tests for Grade 2 (second half) and Grade 3. Form I. Bureau of Publications, Teachers' College, Columbia University, New York. Copyright 1942 by Arthur I. Gates.

Type I WORD RECOGNITION

Gates, as above.

Type II PARAGRAPH READING

The latest versions of the same tests were used more extensively, as the chart in the Design section indicated. These were as follows:

California Achievement Tests, Complete Battery (reading, mathematics, language). Level 2. Form A. Copyright 1970 C.T.B. for Grades 2-4.

California Short-Form Test of Mental Maturity, Level 1H, Grades 3 and 4. Copyright 1962 C.T.B.

Gates-MacGinitie Reading Tests Primary C-Form 1 Vocabulary and Comprehension for Grade 3. Copyright 1964. Teachers' College Press, Columbia University.

Securing Participation

The prestige of the Minister's Advisory Committee on Student Achievement, and of the steering committee for the present study, were both used to assist in securing participation. A carefully-worded explanatory letter was sent to each superintendent of an administrative unit associated with a school selected for the study. See Appendix 1 for the letter, and Appendix 2 for the list of Superintendents in the schools which participated. On receipt of the requested approval, the principal of the school was approached. See Appendix 3 for the letter. In many instances, the superintendent had already contacted the school. See Appendix 4 for the list of participating schools.

Insofar as was possible, personal contact was made with the superintendents of large systems. After a certain date, if no reply was received from a school, telephone contact was made. In almost all instances, such schools had been contacted by the superintendent, had agreed to participate, and assumed that their participation was assured.

The response to the requests for participation was excellent, considering that four to five hours of testing time, and no return of results, was involved.

Distributing Tests

For the four large school systems (Edmonton Public, Edmonton Separate, Calgary Public, Calgary Separate) the superintendent kindly consented to permit the tests to be distributed by the system. Tests for other schools were mailed.

Each test package included general instructions as well as the detailed instructions for administering the tests. Different tests were administered in schools of the various groups 1-4 (see the section on Design, and Appendix 4). The general instructions for schools in Group 1, are listed in Appendix 5, and for Groups 2, 3, and 4 in Appendices 6, 7, and 8.

The tests were packaged in jiffy bags or, for larger schools, in boxes. The tests for each teacher were separately packaged. Details of what were included are listed in Appendices 5, 6, 7, and 8. When a package was mailed, a letter was sent. See Appendix 9. Enclosed with the letter was a return label and return postage.

The system worked well. Schools were able to reuse the jiffy bags in most cases, and the return label and postage seemed adequate.

Return of Tests

Every school which agreed to participate returned the tests as requested.

CHAPTER III

AGE OF STUDENTS

As has been explained previously, there was no one sample in the Alberta Grade III 1977 study. In presenting the age of students, the group of Grade III students in the province other than in E.P.S. (approximately 2700) and all of the students in E.P.S. (approximately 4700 in 1977) can be compared. These comparisons, along with the age of E.P.S. Grade III students in 1956, are presented in Table 3. It can be observed that the Province Less E.P.S. students in 1977 were older by nearly a month (0.85) than

Table 3
Average Age of Students in Months

	Province Less E.P.S. 1977			E.P.S. 1977			E.P.S. 1956		
Sex	No.	Mean Age in Months	S.D.	No.	Mean Age in Months	S.D.	No.	Mean Age in Months	S.D.
M	1367	107.79	6.43	2390	106.87	5.82	1965	108.83	7.77
F	1321	106.64	5.84	2330	105.85	5.53	1878	107.32	7.05
Total	2688	107.22	6.25	4720	106.37	5.59	3843	108.09	7.37

were the E.P.S. students in 1977. Both of these groups were younger than were the 1956 students. The progression of average age from older to younger was E.P.S. 1956, Province Less E.P.S. 1977, and E.P.S. 1977. In a sense, the two E.P.S. groups in Table 3 were total populations, therefore it is not necessary to calculate statistical significance of differences. The two groups, however, should probably be considered as samples of the 1977 and 1956 provincial populations when comparisons are to be made with the Province Less E.P.S. sample. Even when the extreme view is taken that all of the groups are samples, the differences between any pair of means is highly significant in the statistical sense.

CHAPTER IV

READING

Gates MacGinitie Test (1964 edition)

The test used was the Gates MacGinitie Reading Tests Primary C-Form 1, Vocabulary and Comprehension for Grade III, Copyright 1964, Teachers' College Press, Columbia University. A Teacher's Manual and a Technical Manual are available. A few brief comments based on the Teacher's Manual follow.

The Primary C level was designed for use in the third grade. The Vocabulary test was intended to sample the student's ability to recognize or analyze isolated words. The first twelve items are like those in its predecessor, the Gates Word Reading test. A picture is followed by four words, one of which describes the picture. The next 40 items replace the picture with a word, and the task is to select a synonym from among four words. The Comprehension test was designed to measure the student's ability to read and understand whole sentences and paragraphs. As the Manual states "The child must grasp the total thought clearly if he is to answer correctly." Each of the 24 items presents a paragraph followed by two questions. The correct answer to each question is one of four words given. There are 48 scores on Comprehension.

The reliabilities given in the Technical Manual were "from the school with the median average alternate-form reliability" or "split-half reliability coefficients" from the same schools. For Vocabulary, the alternate-form reliability reported was 0.85 and the split-half was 0.89. For Comprehension, the corresponding figures were 0.89 and 0.91.

The Teacher's Manual states that "These are not speed tests." However, it goes on to indicate that the norms provided will only apply if the time limits are observed.

Table 4 presents the results on the Gates MacGinitie test. It shows that the mean scores for vocabulary, and for comprehension, were higher for the "Province Less E.P.S." portion of the sample than for Group 1 E.P.S. (a 10% sample). The mean score for the total sample was 37.68 for vocabulary and 33.08 for comprehension. These constitute benchmarks for future reference. The KR-20 reliabilities are given where available.

The difference between means for vocabulary for Province Less E.P.S. and E.P.S. Group 1 was 1.05. This difference is significant

Table 4
Reading: Gates MacGinitie Test (1964 edition)

Sample	Subtest	Number	Mean	S.D.	KR-20
Province Less E.P.S.	Voc	2539	37.85	7.55	0.88
	Comp	2540	33.25	9.40	0.92
E.P.S. Group 1	Voc	459	36.80	7.35	0.87
	Comp	458	32.15	9.37	0.91
Total Sample	Voc	2998	37.68	7.53	
	Comp	2998	33.08	9.40	

beyond the 0.01 level. Similarly, the difference for comprehension was 1.10 which is also highly significant. It must be remembered, therefore, that these two groups were different in their scores in these areas.

California Achievement Test - Reading (1970 edition)

The test used was Level 2, Form A, Complete Battery (Reading, Mathematics, Language) 1970 Edition, California Achievement Tests. The Examiner's Manual is available and only brief comments will be included here. It states that "Items were selected in conformance with the two basic criteria (of) curricular relevance and statistical quality." The vocabulary part of the reading test consisted of 20 items for which the teacher pronounced a word and the student selected the correct word from four (called "word skills") and another 20 items (called "words in context") in which a word was given in a phrase (e.g. "jump over the fence") and the student was to select the correct synonym from among four words. These two subtests made up the vocabulary part. The comprehensive part consisted of 45 items of three kinds: the first "designed to measure the student's ability to put words in alphabetical order" (5 items); the second "concerns the student's ability to use a table of contents and an index" (5 items); and 35 multiple-choice items to test "the student's comprehension and evaluation of five brief stories."

Reliability as given in a Bulletin of Technical Data for the Grade 3.6 level based on 350 to 400 cases for Vocabulary was 0.921, for Comprehension 0.933, and for Reading was 0.957. These are KR-20 reliabilities.

The results for the California Achievement Test - Reading (1970 edition) are presented in Table 5.

Table 5

California Achievement Test - Reading (1970 edition)

Sample and Test	ITEMS	Number	Mean	S.D.	KR-20
Province Less E.P.S.					
A. Word Skills	20	2513	19.19	2.31	
B. Words in Context	20	2513	17.36	3.03	
Reading Vocabulary (A+B)	40	2513	36.55	4.40	
Reading Comprehension	45	2513	35.66	7.60	
Total Reading	85	2513	72.23	11.03	0.93
E.P.S. Group 2					
A. Word Skills	20	470	19.33	1.82	
B. Words in Context	20	470	17.46	2.79	
Reading Vocabulary (A+B)	40	470	36.79	4.02	
Reading Comprehension	45	470	34.55	10.13	
Total Reading	85	470	71.34	12.44	
Total Sample					
A. Word Skills	20	2983	19.21	2.24	
B. Words in Context	20	2983	17.38	2.99	
Reading Vocabulary (A+B)	40	2983	36.59	4.34	
Reading Comprehension	45	2983	35.49	8.06	
Total Reading	85	2983	72.09	11.27	

These results are generally consistent with those found for the Gates MacGinitie test in that the Province Less E.P.S. group scored approximately the same or higher on each of vocabulary and comprehension than did the E.P.S. group. The mean score for the total sample was 72.09 on the total test. This constitutes the benchmark for future reference.

The differences between the means for vocabulary for the Province Less E.P.S. and E.P.S. Group 2 was 0.24. This difference is not statistically significant. For comprehension the corresponding difference was 1.11 which is significant beyond the 0.01 level. It can be inferred that the two groups differed in their scores for comprehension but not for vocabulary.

Gates Tests (1942 edition)

For a description of these tests, the reader is referred to the General Report or to the Technical Report of the Edmonton Grade III Achievement: 1956-1977 Comparisons Study. In this related study, all of the Grade III students in the Edmonton Public School system wrote these tests in 1977, and previously, in 1956. In 1977, Group 1 of the "Province Less E.P.S." wrote the same tests. These were the Gates Word Recognition Test (48 items) and the Gates Paragraph Reading Test (24 items, 32 scores). Table 6 sets forth the results. It will be noticed that these are in terms of all the

Table 6
Gates Tests (1942 edition)

Group	Year	Test						
			GWR			GPR		
		No.	Mean	S.D.	KR-20	Mean	S.D.	Kr-20
Province Less E.P.S. Group 1	1977	573 537	38.51	6.51	0.89	22.76	4.80	0.84
Edmonton Public	1977	4430	39.38	4.87	0.81	23.15	4.36	0.79
Edmonton Public	1956	3540 3569	37.28	6.19	0.86	22.63	4.37	0.80

items on the tests. In word recognition (GWR), the highest scores were achieved by E.P.S. 1977, followed by the Province Less E.P.S. Group 1, followed by Edmonton Public 1956. The three groups were considered to be samples and the null hypothesis that all samples were from the same population was tested. This hypothesis was rejected at the $p = .05$ level, therefore, it was concluded that the differences in mean scores are not due to sampling errors. While a similar order was exhibited for paragraph reading, the difference between the Province Less E.P.S. Group 1 and each of the two Edmonton Public groups was not statistically significant. The difference between the Edmonton 1977 and Edmonton 1956 groups was highly significant.

No provincial benchmarks were calculated for these tests because their use was for comparisons.

California Achievement Test - Reading (1950 version)

As was the case for the Gates Tests (1942 version), the reader is referred to the companion Edmonton Grade III Achievement: 1956-1977 Comparisons Study for a detailed description of the test. The Reading part of the California Achievement Tests in the 1950 version had a 55-item section on Reading Vocabulary and a 30-item section on Reading Comprehension. The former had three subtests (word form, 20 items; word recognition, 15 items; and meaning of opposites, 20 items) while the latter also had three, with equal numbers of items (following directions, directly stated facts, and interpretations).

Table 7 sets forth the results, which parallel those of the Gates (1942) Tests. On all 85 of the test items, the E.P.S. 1977

Table 7

California Achievement Test - Reading (1950 edition)

Group	Year	Number	Mean	S.D.	KR-20
Province Less E.P.S. Group 2	1977	334	76.75	5.14	0.83
Edmonton Public	1977	4417	77.58	5.93	0.85
Edmonton Public	1956	3576	75.26	6.97	0.87

Grade III students scored highest, the Province Less E.P.S. scored next, and the E.P.S. 1956 Grade III students scored lowest. When all three of the groups were considered as samples, differences between means of all pairs of groups were significant at the $p=.05$ level.

No benchmarks representing Alberta as a whole were calculated.

CHAPTER V

MATHEMATICS

California Achievement Test (1970 edition)

The test used was Level 2, Form A, Complete Battery (Reading, Mathematics, Language) 1970 edition, California Achievement Tests. The Examiner's Manual is still available so only brief comments will be included here. See also the comments in Chapter IV. The battery was designed to span Grades 2 through 4. The Mathematics Concepts section with 30 items was designed to "measure the student's understanding and use of mathematical concepts in a variety of contexts." The basic concepts included "signs and symbols, various forms of measurement, sequences, money, time, geometry, and place values." The problems section with 15 items was designed to "measure the student's ability to comprehend and correctly answer a variety of word problems." These two sections combined, with 45 items, constituted the Concepts and Problems part of the test. The mathematics computation had 72 items (addition, 20 items; subtraction, 16; multiplication, 20; division, 16). The KR-20 reliabilities reported for concepts and problems in a Bulletin of Technical Data, based on 300-400 cases, was 0.900 for concepts and problems, 0.939 for computation, and 0.954 for the total test.

The results for the California Achievement Test - Arithmetic (1970 edition) are presented in Table 8. As can be seen, the E.P.S. Group 3 scored higher by 1.39. This superiority was in number concepts (0.80) and problems (0.65). The mean score for the total sample was 96.92. This constitutes the benchmark for future reference.

The difference between means for the total test (117 items) for the Province Less E.P.S. and E.P.S. Group 3 was 1.39. This difference is significant beyond the $p = .01$ level.

Table 8

California Achievement Test - Mathematics (1970 edition)

Sample and Test	ITEMS	Number	Mean	S.D.	KR-20
Province less E.P.S.					
Concepts	30	2519	24.28	3.82	
Problems	15	2519	10.63	2.75	
Concepts and Problems	45	2519	34.92	5.94	
Addition	20	2519	18.50	2.16	
Subtraction	16	2519	14.44	2.38	
Multiplication	20	2519	17.27	4.47	
Division	16	2519	11.57	4.95	
Computation	72	2519	61.78	11.36	
Total Test	117	2519	96.70	15.55	0.95
E.P.S. Group 3					
Concepts	30	476	25.08	3.52	
Problems	15	476	11.28	2.58	
Concepts and Problems	45	476	36.35	5.56	
Addition	20	476	18.39	2.32	
Subtraction	16	476	14.23	2.81	
Multiplication	20	476	17.27	4.44	
Division	16	476	11.85	4.72	
Computation	72	476	61.73	11.77	
Total Test	117	476	98.09	15.73	0.95
Total Sample					
Concepts	30	2995	24.41	3.78	
Problems	15	2995	10.73	2.73	
Concepts and Problems	45	2995	35.15	5.90	
Addition	20	2995	18.48	2.19	
Subtraction	16	2995	14.41	2.45	
Multiplication	20	2995	17.27	4.46	
Division	16	2995	11.61	4.91	
Computation	72	2995	61.77	11.42	
Total Test	117	2995	96.92	15.58	

California Achievement Test - Arithmetic (1950 edition)

For a description of this test, the reader is referred to the General Report or to the Technical Report of the Edmonton Grade III Achievement: 1956-1977 Comparisons Study. In 1977 and earlier (in 1956), all of the Grade III students in the Edmonton Public School system wrote this test. Table 9 sets forth the results of the use of this test, comparing results for 1956 Edmonton Grade III students

Table 9

California Achievement Test - Arithmetic (1950 edition)

Group	Year	Number	ITEMS	Mean	S.D.	KR-20
Province Less E.P.S. Group 3	1977	771	38	28.66	4.81	0.83
	1977	771	50	34.57	6.75	0.88
	1977	768	80	60.33	10.23	
Edmonton Public Schools	1977	4348	38	28.98	4.74	0.82
	1977	4348	50	35.14	6.49	0.86
	1977	4367	80	61.72	9.29	
Edmonton Public Schools	1956	3506	38	30.02	4.00	0.78
	1956	3506	50	37.50	5.65	0.84
	1956	3506	80	63.44	7.60	

with the corresponding group in 1977 and each of these with the Province Less E.P.S. in 1977 on 38 items, i.e. 80 items of the total test less 30 items in sections F, G, and H (computation) and less 12 items deemed inappropriate. Also shown are results for all 80 items, and results for 80 items less F, G, and H.

An examination of Table 9 reveals that on every comparison, the E.P.S. Grade III students of 1956 scored highest, followed by the E.P.S. Grade III students of 1977, followed by the Province Less E.P.S. group of Grade III students in 1977. Again, the three groups were treated as samples and differences between means were tested for significance. All of the differences except one were significant at the $p = .05$ level. The exception was the difference of .32 between the Province Less E.P.S. Group 3 and Edmonton Public 1977 on the first 38 items of the arithmetic test. It was noted previously that arithmetic scores are curriculum sensitive.

CHAPTER VI

LANGUAGE

California Achievement Test (1970 edition)

The test used was Level 2, Form A, Complete Battery (Reading, Mathematics, Language) 1970 edition, California Achievement Tests. The Examiner's Manual is available to provide more detail so only brief comments will be included. The Language section included a total of 152 items. There were 30 in Capitalization, 72 in Punctuation (36 on identifying what was wrong and 36 on correctly identifying placement), 25 on usage and structure, and 25 multiple-choice items on spelling. The KR-20 reliabilities reported in the Bulletin of Technical Data for mechanics was 0.948, for usage and structure 0.833, for spelling 0.860, and for the total test 0.953.

The results for the California Achievement Test - Language (1970 edition) are presented in Table 10. It can be observed that the Province Less E.P.S. group scored higher than E.P.S. Group 2 on every subtest except spelling; however, the difference for Capitalization only is statistically significant. On the total test, the mean score for Province Less E.P.S. exceeded the mean for E.P.S. by 3.53. This difference is statistically significant beyond the $p = .01$ level.

The mean score for the total sample was 90.69 on the total test. This constitutes a benchmark for future reference as it is based on a representative sample of grade 3 pupils across the province.

Table 10

California Achievement Test - Language (1970 edition)

Sample and Test	ITEMS	Number	Mean	S.D.	KR-20
Province Less E.P.S.					
Capitalization	30	2503	20.09	6.61	
Placement of Punctuation	36	2503	18.42	7.97	
Punctuation Mark Missing	36	2503	15.68	8.02	
Usage and Structure	25	2503	17.95	4.09	
Spelling	25	2503	19.02	4.10	
Total Language	152	2503	91.21	25.28	0.96
E.P.S. Group 2					
Capitalization	30	435	17.06	7.66	
Placement of Punctuation	36	435	18.33	6.98	
Punctuation Mark Missing	36	435	15.34	7.10	
Usage and Structure	25	435	17.90	4.09	
Spelling	25	435	19.04	3.87	
Total Language	152	435	87.68	22.95	0.95
Total Sample					
Capitalization	30	2938	19.64	6.86	
Placement of Punctuation	36	2938	18.41	7.83	
Punctuation Mark Missing	36	2938	15.63	7.89	
Usage and Structure	25	2938	17.94	4.09	
Spelling	25	2938	19.02	4.07	
Total Language	152	2938	90.69	24.98	

California Achievement Test - Language (1950 edition)

As before, the reader is referred to the General Report or the Technical Report of the Edmonton Grade III Achievement: 1956-1977 Comparisons Study for a detailed description of the test. Briefly, it consisted of 10 items on capitalization, 5 on punctuation, and 25 on spelling. Unlike the 1970 version, the teacher said the word, used it in a sentence, and repeated it in administering the spelling portion of the test.

Table 11 sets forth the results. For all 40 items, the Province Less E.P.S. group scored highest, then E.P.S. 1977, then E.P.S. 1956.

Table 11

California Achievement Test - Language (1950 edition)

Group	Year	Number	ITEMS	Mean	S.D.	KR-20
Province Less E.P.S. Group 2						
Spelling Only	1977	675	25	18.01	3.35	0.81
All Items	1977	675	40	25.62	5.26	
Edmonton Public						
Spelling Only	1977	4373	25	18.30	3.21	0.80
All Items	1977	4391	40	25.41	5.17	
Edmonton Public						
Spelling Only	1956	3495	25	16.16	3.53	0.82
All Items	1956	3564	40	24.24	5.35	

For spelling only, the order from high to low was E.P.S. 1977, Province Less E.P.S., then E.P.S. 1956. It can be observed that the two groups, Province Less E.P.S. and E.P.S. 1977, had similar scores in both spelling and the total language test. For spelling all of the differences between means were significant at the $p = .05$ level. For the total test the mean for Edmonton Public 1956 was significantly lower than the means for the other two groups, but means for Province Less E.P.S. and E.P.S. did not differ significantly.

No benchmark was calculated as these results were for comparison only.

CHAPTER VII

MENTAL MATURITY

The test used was the California Short-Form Test of Mental Maturity Level 1H, 1963 S-Form, copyright 1962 by McGraw Hill Inc. The Examiner's Manual is available so only brief references will be included here. The Manual claims that the 1963 Short-Form "is extensively modified in test content and composition." It states that the test consists of seven units, composed of items selected for the most effective measurement. The seven tests were grouped according to four factors: Factor 1, logical reasoning (opposites 13 items, similarities 13 items, analogies 15 items); Factor 2, numerical reasoning (number series 14 items, number problems 10 items); Factor 3, verbal concepts (verbal comprehensions 25 items), and Factor 4, memory (delayed recall 20 items). In total, there were 110 items. The Manual states that Level 1H is designed for grades 3-4.

The reliability given in the Technical Report is a Kuder-Richardson formula 21 reliability of 0.92 for the total test. The number of students was not stated but was probably the large standardization group.

Table 12 presents the results on the California Mental Maturity (1963 edition). It will be observed that the mean scores are very similar, the difference being 0.16. This difference was not statistically significant.

Table 12

California Short-Form Mental Maturity Level 1H (1963 ed.)

Sample	Items	Number	Mean	S.D.	KR-20
Province Less E.P.S.	110	2525	72.81	13.06	0.90
E.P.S. 1977 Group 4	110	450	72.65	12.79	0.90
Total Sample	110	2975	72.79	13.02	

California Short-Form Test of Mental Maturity (1953 edition)

As before, it can be noted that a detailed description of this test can be found in the General Report or in the Technical Report of the Edmonton Grade III Achievement: 1956-1977 Comparisons study. The test included 98 items, of which 52 were designed as language factors (inference, 12 items; numerical quantity, 12; verbal concepts, 28) and 46 as non-language factors (sensing right and left, 10 items; manipulation of areas 12 items; similarities, 12 items; and number series, 12 items). These items were the same as those of the 1950 revision. A "split-halves Spearman-Brown reliability coefficient of 0.91" based on 700 pupils in grades 2 and 3 was reported.

Table 13 presents the results of this test. If all of the groups are considered to be samples, the hypothesis that all samples come from one population was rejected at the $p = .05$ level. In other words, all differences between pairs of means were found to be significant.

Table 13
California Short-Form Test of Mental Maturity (1953 edition)

Group	Year	Items	Number	Mean	S.D.	KR-20
Province Less E.P.S. Group 4	1977	98	642	79.50	6.29	0.76
Edmonton Public Schools	1977	98	4378	80.12	6.82	0.79
Edmonton Public Schools	1956	98	3443	76.09	6.14	0.72

CHAPTER VIII

METROPOLITAN AND NON-URBAN COMPARISONS

The primary purpose of the study was to establish some provincial benchmarks of achievement at the Grade III level. The results reported so far were for various provincial samples. However, the conventional wisdom, and early studies such as that of Carmichael and Rees (1955), indicated that achievement, at least in reading, was higher in urban than in non-urban areas. This chapter explores the possibility that important differences in achievement were not revealed by the provincial benchmarks.

In order to ensure reasonably large numbers, comparisons were made only between the achievement of students in metropolitan urban areas and in non-urban areas. The first group included the four school districts in the two large cities: Calgary Public, Calgary Separate, Edmonton Public, Edmonton Separate. It will be recalled that for different tests different samples were involved. For the newer tests, the number of students in the first group was in the order of 1500. The second group was Divisions, Counties, and Independents, with approximately 1300 students. Appendix 4 sets forth the schools which were in these categories.

It is generally recognized that age and ability are associated with achievement. Age is reported for the various samples, and overall ability is reported for the students who wrote the ability tests.

Table 14 sets forth the comparative results. It will be noted that the numbers of students involved in the original versions of the various tests were relatively small, in the order of 100 to 500, while those for the newer tests were larger.

Table 14 compares achievement and ability, and shows the ages of students for the samples from the metropolitan districts of Calgary and Edmonton; and from the non-urban Divisions, Counties, and Independent Districts. Thus, in reading, on the 1964 version of the Gates MacGinitie test, 1479 students from the metropolitan areas of Calgary and Edmonton, with an average age of 106.79 months, achieved an average score on the 52 item vocabulary test of 37.50 with a standard deviation of 7.47. In comparison, 1333 students from the non-urban Divisions, Counties, and Independent Districts, with an average age of 107.68 months achieved an average score of 37.77 with a standard deviation of 7.48. The difference between

Table 14

Metropolitan and Non-Urban Comparisons

Subject and Tests	ITEMS	Metropolitan				Non-Urban				Difference in means
		N	Age (Months)	Achievement Score		N	Age (Months)	Achievement Score		
				mean	S.D.			mean	S.D.	
READING										
1964 Gates MacGinitie										
Vocabulary	52	1479	106.79	37.50	7.47	1333	107.68	37.77	7.48	0.27
Comprehension	48	1482	106.78	32.63	9.40	1333	107.68	33.39	9.41	0.76*
1970 California Achievement	85	1493	106.75	71.54	11.75	1297	107.62	72.60	10.60	1.06*
1950 California Achievement	85	307	107.10	77.47	4.76	137	106.71	75.80	6.33	-1.67*
1942 Gates Word Recognition	48	376	106.32	38.12	6.54	294	108.06	39.26	5.94	1.14*
1942 Gates Paragraph Reading	24	353	106.26	22.51	5.11	281	108.06	23.24	4.23	0.73*
MATHEMATICS										
1970 California Achievement	117	1501	106.72	96.68	15.68	1301	107.85	96.76	15.64	0.08
1950 California Achievement	80	376	107.18	59.70	10.70	371	107.68	60.12	9.64	0.42
LANGUAGE										
1970 California Achievement	152	1457	106.79	87.97	24.43	1292	107.62	93.32	25.31	5.35*
1950 California Achievement	40	325	107.26	25.50	5.02	444	108.06	25.68	5.49	0.18
ABILITY										
1963 California Mental Maturity	110	1472	106.68	72.55	12.86	1310	107.60	72.89	13.16	0.34
1953 California Mental Maturity	98	445	106.41	79.65	6.41	282	106.91	79.71	6.27	0.06

* Significant at the 0.05 level

these averages was 0.27 which was not statistically significant at the 0.05 percent level. The rest of the table can be read in the same way.

It can be noted that of twelve comparisons six showed a statistically significant difference in average score. Five of these favoured the non-urban students and one the metropolitan students. In general, the non-urban students exhibited a slight superiority.

The conventional wisdom and the studies of yesterday are brought into question at this grade level by these findings. It appears that equality of achievement has been achieved! The reader is reminded that students in the samples from metropolitan areas were in general younger, in the order of a month or less.

CHAPTER IX

RESULTS AND DISCUSSION

The primary purpose of this study, as stated in Chapter II, was to establish some achievement benchmarks for Alberta Grade III pupils. This was done for the Gates MacGinitie Reading Tests; Vocabulary and Comprehension, and for the California Achievement Tests; Reading, Mathematics, and Language. Table 14 contains all of the provincial benchmarks established in this study.

Table 15

Achievement Benchmarks for Alberta

Test	N	Mean	S.D.
Gates MacGinitie Reading -			
Vocabulary	2998	37.68	7.53
Comprehension	2998	33.08	9.40
California Achievement - Reading			
A. Word Skills	2983	17.21	2.24
B. Words in Context	2983	17.38	2.99
A + B	2983	36.59	4.34
C. Comprehension	2983	35.49	8.06
Total A+B+C	2983	72.09	11.27
California Achievement - Mathematics			
A. Concepts	2995	24.41	3.78
B. Problems	2995	10.73	2.73
A + B	2995	35.15	5.90
C. Addition	2995	18.48	2.19
D. Subtraction	2995	14.41	2.45
E. Multiplication	2995	17.27	4.46
F. Division	2995	11.61	4.91
Total C+D+E+F	2995	61.77	11.42
Total A+B+C+D+E+F		96.92	15.58
California Achievement - Language			
A. Capitalization	2938	19.64	6.86
B. Punctuation Placement	2938	18.41	7.83
C. Missing Punctuation	2938	15.63	7.89
D. Usage and Structure	2938	17.94	4.09
E. Spelling	2938	19.02	4.07
Total A+B+C+D+E		90.69	24.98

Another purpose of the study was to compare achievement of Grade III pupils in Edmonton with achievement in the rest of the province, both with respect to the tests used in Edmonton in 1956, and the more recent versions of these tests.

Figures shown previously indicate that the Province Less E.P.S. sample scored significantly higher than E.P.S. in the following tests in the newer series:

Gates MacGinitie - vocabulary
Gates MacGinitie - comprehension
California Reading - comprehension
California Language - capitalization
California Language - total test

E.P.S. samples scored significantly higher in the following tests of the newer series:

California Mathematics - concepts and problems
California Mathematics - total test

In the following tests of the newer series, the differences between means for the Province Less E.P.S. and E.P.S. were not significant.

California Reading - vocabulary
California Reading - total test
California Mathematics - computation
California Language - placement of punctuation
California Language - punctuation mark missing
California Language - usage and structure
California Language - spelling

In the older versions of the tests, the Edmonton Public System 1956 (E.P.S. 1956) group scored significantly lower than both of the other groups in the following tests:

Gates Word Recognition
California Reading
California Language

It should be noted that the lower mean score in California Language was entirely attributable to spelling.

For the Gates Paragraph Reading test, the E.P.S. 1977 group scored significantly higher than both of the other groups. The E.P.S. 1956 and the Province Less E.P.S. means were not significantly different.

The E.P.S. 1956 group scored significantly higher than the other two groups in the California Arithmetic test, and the E.P.S. 1977 group scored higher than the Province Less E.P.S. group in Mathematics subscores with the exception of computation.

Table 16

Grade Equivalent Scores Test Means

Test	E.P.S. '77 Group		E.P.S. '56 Group		Province Less E.P.S. Group	
	Mean	Grade Equiv.	Mean	Grade Equiv.	Mean	Grade Equiv.
Word Recognition (1942 cd.)	39.38	4.7	37.28	4.3	38.51	4.6
Paragraph Reading (1942 ed.)	23.15	4.2	22.63	4.1	22.76	4.2
MacGinitie Vocabulary (1964 ed.)	36.80	4.2	--	--	37.85	4.4
MacGinitie Comprehension (1964 ed.)	32.15	4.1	--	--	33.25	4.4
ornia Reading (1950 ed.)	77.58	4.8	--	--	76.75	4.6
ornia Reading (1970 ed.)	71.40	5.0*	--	--	72.23	5.0*
ornia Arithmetic (1950 ed.)	61.72	4.7	63.44	4.8	60.69	4.7
ornia Mathematics (1970 ed.)	98.02	4.3	--	--	96.70	4.1
ornia Language (1950 ed.)	25.41	4.6	24.24	4.4	25.62	4.6
ornia Language Spelling (1970 ed.)	19.04	5.0*	--	--	19.02	5.0*
ornia Language Usage etc. (1970 ed.)	19.77	5.5*	--	--	19.87	5.5*

These values were estimates arrived at by extrapolation. This procedure became necessary when the Alberta means were above the means for the highest grade equivalents listed in the manuals.

A third purpose of this study was to determine, if possible, whether the achievement standards of Grade III students in Alberta on a whole had changed over the period from 1956 to 1977. The difficulty was that, while Edmonton Public School students had been given standardized tests in 1956, students in other parts of the province had not. It is possible, however, to reach some tentative conclusions on the basis of indirect information.

Table 16 indicates that in 1956 the E.P.S. Grade III students performed somewhat above the American norms on all of the tests. For example, the grade equivalent of the means on Gates Word Recognition and Gates Paragraph Reading were 4.3 and 4.1 respectively in 1956. A grade equivalent of 3.9 was expected, since the students were near the end of the Grade III term. In 1977 the grade equivalents of the E.P.S. samples were generally higher, with California Arithmetic (or Mathematics) being an exception. The general improvement in grade equivalent scores provides some evidence that achievement standards had held up over the years. The view that the higher scores is an artifact caused by falling American norms is untenable because the fact remains that the 1977 Edmonton group outperformed the 1956 group on the tests employed in 1956.

In past years the conventional wisdom has been that achievement in large city schools in Alberta was superior to achievement in non-urban schools. There was some evidence supporting this claim. A study by Carmichael and Rees (1955) showed that reading scores for Grade IV students in urban and town schools were significantly higher than scores in graded rural, and in ungraded rural schools. Figures in Table 14 indicate that the gap in achievement that existed between urban and non-urban students in the 1950s has been closed. The two groups were found to be much the same in this study, and differences that did appear might be in favor of either the urban or non-urban group.

The 1977 Grade III Edmonton Public School students performed slightly below the level achieved by the 1956 group in arithmetic; however, the 1977 means are still well above those provided by the publisher to represent American standards. In reading and language, however, the 1977 Grade III students in the Edmonton Public System outperformed the 1956 group, and the Province Less Edmonton Public School students performed about as well as the Edmonton Public students. It is evident, therefore, that standards in reading and language have risen substantially between 1956 and 1977.

Finally, there is one further piece of evidence which supports the case for improving standards that must not be overlooked. In 1977 the Grade III students were, on the average, younger than their counterparts in 1956.

REFERENCES

Carmichael, Anne, and Rees, Robert E. A Survey of Reading Achievement in Alberta Schools. *Alberta Journal of Educational Research*, 1, No. 1, 1955, pp. 18-33.

Clarke, S. C. T., Nyberg, V., and Worth, W. H. *Edmonton Grade III Achievement Study: 1956-1977 Comparisons.* Edmonton: Alberta Education, 1977.**

Clarke, S. C. T., Nyberg, V., and Worth, W. H. *Technical Report on Edmonton Grade III Achievement: 1956-1977 Comparisons.* Edmonton: Alberta Education, 1978.

Gates, Arthur I. *Manual of Direction, Gates Advanced Primary Reading Tests, Grade 2 (Second Half) and Grade 3.* New York: Bureau of Publications, Teachers' College, Columbia University, 1943.

Gates, Arthur I., and MacGinitie, Walter H. *Teacher's Manual, Gates-MacGinitie Reading Tests, Primary C, Vocabulary and Comprehension for Grade 3.* New York: Teachers' College Press, Teachers' College, Columbia University, 1965.

Tiegs, W., and Clark, Willis W. *Manual, California Achievement Tests Complete Battery, Primary Grades 1, 2, 3, 4L Forms AA-BB-CC-DD.* Los Angeles: California Test Bureau, 1951.

Tiegs, Ernest W., and Clark, Willis W. *Bulletin of Technical Data Number 1, California Achievement Tests.* Monterey, California: CTB/McGraw-Hill, 1970

** The reader interested in literature related to achievement comparisons is referred to Chapter II of this study.

APPENDIX 1

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

Dear Superintendent,

This letter requests your approval for the participation of the schools listed at the conclusion in the Alberta Grade III Achievement Study.

You are no doubt well aware of the public concern about student achievement. At government level, it sparked the formation in the fall of 1976 of the Minister's Advisory Committee on Student Achievement (MACOSA). This committee is broadly based, representing the ATA, ASTA, AF of L, C of C, CASS, Alberta Education, Advanced Education, and the committee on the Articulation of High School and Post-Secondary Educational Institutions. MACOSA is sponsoring the study, and has appointed a steering committee composed of Jim Anderson, Executive Assistant, Educational Services, ASTA; Bill Brooks, Executive Assistant, Professional Development, ATA; Al Myhre, Superintendent of Schools, County of Parkland (or designee), CASS; Clarence Rhodes, Educational Consultant, Alberta Education; and Harry Sherk, Executive Director, MACOSA.

The primary purpose of the study is to establish benchmarks of achievement in reading, arithmetic, and language. A second purpose is to link test results which used original versions of tests with the latest versions of these tests, to permit comparisons of achievement between sub-groups of pupils from different geographic areas and time frames. The provincial study is a companion study to, and is linked with the Edmonton Grade III Achievement: 1956-1977 Comparisons.

In 1956 about the end of May, every pupil in Grade III in the Edmonton Public Schools was given a number of tests. Essentially, these were the following: A_o original version Gates reading (two booklets); B_o original version of California reading and language; C_o original version of California arithmetic (B_o and C_o were in one test booklet, the California Achievement Battery);

D_o original version of California Mental Maturity. There is a later version of each of these tests, A_L, B_L, C_L, D_L. In the Alberta Grade III Achievement Study it is proposed to administer these latest versions of the tests plus one unit of the original versions to a province-wide ten percent sample of Grade III students to establish the benchmarks and the linkage required.

The test design is charted below, where Group 1 in the Edmonton Public Schools is a ten percent representative sample of the 4700 Grade III pupils in that system, Group 2 is another (different) ten percent representative sample, and so on. Group 1 in the rest of the province is a twenty-five percent representative sample, and so on. There is a Group 5 in the Edmonton Public Schools which need not concern us.

	EDMONTON PUBLIC (All Gr.III pupils,4700)					REST OF PROVINCE (A 10% rep. sample Gr. III pupils, 2800)				
Group 1	A_o	B_o	C_o	A_L	D_o	A_L	B_L	C_L	A_o	D_L
Group 2	A_o	B_o	C_o	B_L	D_o	A_L	B_L	C_L	B_o	D_L
Group 3	A_o	B_o	C_o	C_L	D_o	A_L	B_L	C_L	C_o	D_L
Group 4	A_o	B_o	C_o	D_L	D_o	A_L	B_L	C_L	D_o	D_L

As you can see, province-wide benchmarks and a tie-in to the Edmonton 1956-1977 comparisons are provided. Each of the test units A_o, B_o, ... or A_L, B_L, etc. takes approximately 40-50 minutes, so the total testing time for five test units is 200-250 minutes. To parallel the procedure used in the Edmonton study, teachers will administer the achievement tests but not the ability tests. We are asking that the principal or his designee (other than the teacher of Grade III students) administer the ability test or tests. The testing is scheduled for the period May 18 - June 1. All of the tests will be marked at the university. Teachers will be asked to indicate any items on the achievement tests which are deemed inappropriate, with reasons. After eliminating items deemed inappropriate, the item by item results for each pupil will be placed on computer tape and analyzed. As you can see, the tests will be used as sources or pools of items which were designed to test reading, arithmetic, and language rather than as tests in the ordinary sense.

The sample unit will be the school. All of the students in Grade III in a school selected as part of the sample by the sampling procedure will be included. No comparisons will be made by schools. The group into which the sampling procedure has allocated each school is indicated.

Since a representative province-wide sample must include schools of all kinds: 1-6, 1-9, 1-12, city, town, rural, small (one-room) to large (40 rooms or more) from all parts of the province, in any one administrative unit the school or schools selected are required for a representative province-wide sample but are most unlikely to be representative of the schools in the administrative unit. For this reason, after very careful deliberation, the steering committee and researchers have decided not to reveal school results. However, on completion of the study each superintendent of an administrative unit included in the study will be sent a copy of the final report.

It is recognized that the teacher time and student time involved is considerable. However, the public concern and continued call for "back to the basics" warrants resource allocation to the question "how well are we doing?". In recognition of its potential contribution, the study is sponsored by MACOSA. The participating schools will be contributing to the cause of education.

We hope that you will approve of us approaching the schools listed below. If you will, it would be most helpful if you could name the teachers of Grade III pupils, indicate the enrollment of Grade III pupils each teacher has, and indicate whether it is a Grade III class, combined 2-3, etc. The timelines are so tight that this information is required as early as is possible. We hope to hear from you soon.

Very sincerely yours,

SCTC/dc

S.C.T. Clarke, Director, Special Sessions
V. Nyberg, Dept. of Educational Psychology
W. H. Worth, Dean, Faculty of Education

SCHOOLS

APPENDIX 2

ALBERTA GRADE III ACHIEVEMENT STUDY

SUPERINTENDENTS OF SCHOOLS IN STUDY

CODE 1 - CITIES - EDMONTON and CALGARY

1. J. Longmore, Superintendent,
   Calgary Public School Board No. 19,
   Education Centre Building,
   515 Macleod Trail S.E.,
   Calgary, Alberta. T2G 2L9

2. J. V. Van Tighem, Superintendent,
   Calgary Roman Catholic Separate School District 1,
   300 - 6th Avenue S.E.,
   Calgary, Alberta. T2G 0G5

3. H. A. McNeil, Superintendent,
   Edmonton Catholic School District No. 7,
   Educational and Administrative Centre,
   9807 - 106 Street,
   Edmonton, Alberta.

Total = 3 Superintendents 26 Schools

CODE 2 - OTHER CITIES

1. Dr. K. Sauer, Superintendent,
   Medicine Hat School District No. 76,
   601 - 1st Avenue S.W.,
   Medicine Hat, Alberta. T1A 4Y7

2. W. T. Brownlee, Superintendent,
   Red Deer School District No. 104,
   4747 - 53 Street,
   Red Deer, Alberta. T4N 2E6

3. F. B. Allore, Superintendent,
   Medicine Hat Catholic Board of Education,
   73 - 7th Street, S.E.
   Medicine Hat, Alberta. T1A 1J2

4. R. P. Plaxton, Superintendent,
   Lethbridge School District No. 51,
   433 - 15th Street, S.,
   Lethbridge, Alberta. T1J 2Z5

5. D. R. Taylor, Superintendent,
   Grande Prairie School District No. 2357,
   10213 - 99 Street,
   Grande Prairie, Alberta. T8V 2H3

Total = 5 Superintendents 26 Schools

CODE 3 - SCHOOL DIVISIONS AND COUNTIES

1. R. Burns, Superintendent,
   Yellowhead School Division No. 12,
   Box 1570,
   Edson, Alberta. T0E 0P0

2. G. S. Opryshko, Superintendent,
   Spirit River School Division No. 47,
   Spirit River, Alberta. T0H 3G0

3. G. M. Hoke, Superintendent,
   County of St. Paul No. 19,
   St. Paul, Alberta. T0A 3A0

4. J. P. McDonald, Superintendent,
   Starland School Division No. 30,
   365 - 2nd Street East,
   Drumheller, Alberta. T0J 0Y0

5. C.R. Elle, Superintendent,
   County of Forty Mile No. 8,
   Foremost, Alberta. T0K 0X0

6. R. A. Gorrie, Superintendent,
   County of Minburn No. 27,
   P.O. Box 550,
   Vegreville, Alberta. T0B 4L0

7. E. L. Deutscher, Superintendent,
   Lac La Biche School Division No. 51,
   Box 298,
   Lac La Biche, Alberta. T0A 2C0

8. G. Matkin, Superintendent,
   Cardston School Division No. 2,
   Box 241,
   CARDSTON, Alberta. T0K 0K0

9. B. Frankcombe, Superintendent,
Pincher Creek School Division No. 29,
P.O. Box 219,
Pincher Creek, Alberta. T0K 1W0

10. R. P. Anctil, Superintendent,
High Prairie School Division No. 48,
Box 870,
High Prairie, Alberta. T0G 1E0

11. L. G. Miller, Superintendent,
County of Vulcan No. 2,
Box 180,
Vulcan, Alberta. T0L 2B0

12. E. Raitz, Superintendent,
County of Leduc No. 25,
Leduc, Alberta. T9E 2X3

13. A. R. MacLeod, Superintendent,
Willow Creek School Division No. 28,
P.O. Box 69,
Claresholm, Alberta. T0L 0T0

14. W. F. Durnin, Superintendent,
Fairview School Division No. 50,
P.O. Box 159,
Fairview, Alberta. T0H 1L0

15. D. A. Smith, Superintendent,
County of Grande Prairie No. 1,
8611 - 108 Street,
Grande Prairie, Alberta. T8V 4C5

16. N.C. Gannon, Superintendent,
County of Beaver No. 9,
P.O. Box 140,
Ryley, Alberta. T0B 4A0

17. G. J. Rancier, Superintendent,
County of Strathcona No. 20,
2001 Sherwood Drive,
Sherwood Park, Alberta. T8A 3W7

18. A. A. Cleveland, Superintendent,
County of Flagstaff No. 29,
Sedgewick, Alberta. T0B 4C0

19. H. E. Miller, Superintendent,
The County of Thorhild No. 7,
Thorhild, Alberta. T0A 3J0

20. J. L. George, Superintendent,
Taber School Division No. 6,
P.O. Box 1239,
Taber, Alberta. T0K 2G0

21. R. Ousta, Superintendent,
County of Red Deer No. 23,
P.O. Box 920,
Red Deer, Alberta. T4N 5H3

22. J. E. Finnman, Superintendent,
Foothills School Division No. 38,
P.O. Box 400,
High River, Alberta. T0L 1B0

23. L. Lorentz, Superintendent,
County of Stettler No. 6,
P.O. Box 1270,
Stettler, Alberta. T0C 2L0

24. R. A. Harback, Superintendent,
County of Vermilion River No. 24,
Kitscoty, Alberta. T0B 2P0

25. D. Watkins, Superintendent,
Westlock School Division No. 37,
P.O. Box 130,
Westlock, Alberta. T0G 2L0

26. F. P. Flanagan, Superintendent,
County of Lacombe No. 14,
P.O. Box 1330,
Lacombe, Alberta. T0C 1S0

27. J. L. Sacher, Superintendent,
Rocky View School Division No. 41,
Postbag Service 3910, Station "B",
Calgary, Alberta. T2M 4M5

28. E. G. Hohn, Superintendent,
County of Camrose No. 22,
5402 - 48A. Avenue,
Camrose, Alberta. T4V 0L3

29. J. Stuart, Superintendent,
Peace River School Division No. 10,
P.O. Box 339,
Peace River, Alberta. T0H 2X0

30. S. Cymbol, Superintendent,
County of Paintearth No. 18 and Neutral Hills S.D. No. 16,
P.O. Box 509,
Castor, Alberta. T0C 0X0

31. S. Lal Mattu, Superintendent,
Wainwright School Division, No. 32,
P.O. Box 1530,
Wainwright, Alberta. T0B 4P0

32. M. O. Kurtz, Superintendent,
East Smoky School Division No. 54,
P.O. Box 210,
Valleyview, Alberta. T0H 3N0

33. R. Kangas, Superintendent,
County of Newell No. 4,
P.O. Box 158,
Brooks, Alberta. T0J 0J0

34. B. Bodnaruk, Superintendent,
County of Ponoka No. 3,
P.O. Box 1830,
Ponoka, Alberta. T0C 2H0

35. A.R. Myhre, Superintendent,
County of Parkland No. 31,
Stony Plain, Alberta. T0E 2G0

36. David D. Smith, Superintendent,
County of Grande Prairie No. 1,
8611 - 108 Street,
Grande Prairie, Alberta. T8V 4C5

Total = 36 Superintendents 52 Schools

CODE 4 - INDEPENDENTS

1. G. B. Hawley, Superintendent,
Bow Corridor Regional School District No. 5,
618 - 7 Avenue, P.O. Box 699,
Canmore, Alberta. T0L 0M0

2. R. Kruchten, Superintendent,
Grimshaw Roman Catholic School District No. 88,
Peace River, Alberta. T0H 2X0

3. S. Digout, Superintendent,
East Central Alberta Catholic Schools,
P.O. Box 1240,
Wainwright, Alberta. T0B 4P0

4. R. C. Spenrath, Superintendent,
   Southern Alberta Rural Catholic Schools,
   P.O. Box 279,
   Taber, Alberta. T0K 2G0

5. J. A. Stevenson, Superintendent,
   Stirling School District No. 647,
   P.O. Box 340,
   Stirling, Alberta. T0K 3E0

6. F. X. Bischoff, Superintendent,
   Sherwood Park Catholic Schools,
   2017 Brentwood Blvd.,
   Sherwood Park, Alberta. T8A 0X2

7. H. L. Treleaven, Superintendent,
   Swan Hills School District No. 5109,
   P.O. Box 120,
   Swan Hills, Alberta. T0G 2C0

8. E. J. Ingram, Educational Administration,
   St. Thomas More Roman Catholic School District No. 35,
   University of Alberta,
   Edmonton, Alberta. T6G 2G5

9. W. G. Zielinski, Superintendent,
   St. Albert Catholic School District No. 3,
   6 St. Vital Avenue,
   St. Albert, Alberta. T8N 1K2

Total = 9 Superintendents 9 Schools

GRAND TOTAL = 53 Superintendents 93 Schools

APPENDIX 3

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

Dear Principal,

The superintendent has indicated his agreement, in response to the enclosed letter, to the participation of your school in the Alberta Grade III Achievement Study. This letter is to request your participation. Because the enclosed letter to the superintendent provides a general description of the whole project, it will not be repeated here. However, we must emphasize that after ensuring that all geographic regions were included, your school was randomly selected, like the winner in a lottery, so that the total sample would be representative of the province.

Participation of your school will involve the following:

1. Agreement as principal, and as teacher(s) of Grade III students that five tests be administered, three of the latest versions of achievement (reading, reading-language, arithmetic), one of the latest version of an ability (mental maturity) test, and one original version of either achievement or ability.

2. Receive the test package (if the mail is delivered) before the middle of May. Detailed instructions for administering the tests will be included in the package(s).

3. Distribute the achievement tests to the teachers of Grade III students and as principal retain the ability tests.

4. Arrange the dates of administration in the period May 18 - June 1. If there is more than one teacher of Grade III students, each test should be administered at the same time in the different rooms. Each test unit, if possible, should be given first thing in the morning.

5. Provide as teachers of Grade III students professional opinion on which test items are deemed inappropriate, by circling the item in red on an extra test booklet provided and giving reasons why the item is deemed inappropriate.

6. Administer, as principal, the ability test or tests or delegate the administration (but not to the Grade III teacher(s)).

7. Ensure that all of the tests are completed. Students who are absent on the day the test is administered will not be tested later, i.e. for the test missed they are not included in the study, but if present for a later test, they are.

8. Ensure that the test booklets provided for use by Grade III teachers to indicate which items are inappropriate, include reasons, the teacher's name, and are returned with the test package.

9. Return the test package in the same container or in the return container. Postage will be provided.

10. Consult by telephone, if the package of tests has not been received by May 18.

Your school has been selected by the sampling procedure used as necessary for inclusion in a ten percent representative province-wide sample and we are counting on your participation.

We were informed by the Superintendent that the Grade III enrolment was as follows:

Teacher	Grade III Enrolment

If there is an error in the above, please correct it since the package of tests will be based on the enrolment provided. We hope that your school will participate. Please let us know as soon as possible as the timelines are very tight. Please write in the space below and return this sheet, in the enclosed stamped, self-addressed envelope.

Very sincerely yours,

S. C. T. Clarke, Director,
Special Sessions.
V. Nyberg, Dept. of Educational
Psychology.
W. H. Worth, Dean, Faculty of
Education.

SCTC/dc
cc: Superintendent of Schools

_____ school _____ participate
will, or will not
in the MACOSA Alberta Grade III Achievement Study.

Group #

_____
Principal

APPENDIX 4

ALBERTA GRADE III ACHIEVEMENT STUDY

LIST OF SCHOOLS APPROACHED EXCEPTING EDMONTON PUBLIC SCHOOLS

CODE 1

CITIES - EDMONTON and CALGARY

Legend: Group Number, Department of Education School Number; Name and Address of School; Principal, Number of Teachers, Grade Level; Number of Students, Teacher(s) Name, Grade Level.

4.	9341 Prince of Wales 253 Parkland Way S.E. Calgary	J.W. Carleton 021	1-6	29 9	Mrs. Mackonka Mrs. McBride
1.	9119 Elbow Park 721 - 38 Avenue S.W. Calgary T2T 2H8	A.B. Mogg 010	1-6	8 10 7 16	Mrs. Cuppy 1-2-3 Mrs. Handy 1-2-3 Mrs. Wen 1-2-3 Mrs. Clarke 3-4
2.	9234 Sunnyside 211 - 7 Street N.W. Calgary T2N 1S2	S.L. Theriault 08	1-6	18	Mrs. Morris 2-3
3.	9130 Ramsay 2223 Spiller Rd. S.E. Calgary T2G 4G9	R.P. Mogan 011	1-6	4 17	Mrs. Jones 2-3 Miss Larsen 2-3
4.	9216 Greenview 203 McKnight Blvd.N.E. Calgary T2E 5S7	P.V. Wybert 012	1-6	9 29	Mrs. Kobberstad 2-3 Mrs. Holdsworth 7/10 Mr. Wybert 3/10
1.	9243 Jerry Potts 3720 - 42 Street N.W. Calgary T3A 0C6	M.L. Bush 013	1-6	20 28	Miss Persson 3-4 Mrs. Thompson 2-3
2.	9317 Dr.Norman Bethune 315 - 86 Avenue S.E. Calgary T2H 1Z2	C.R. Dunn 014	1-6	35	Mrs. Eichhorn Mrs. Abraham
3.	9114 Connaught 1121 - 12 Avenue S.W. Calgary T2R 2G4	K. W. Hubert 016	1-6	6 24	Mrs. Stilson 2-3 Mrs. Peyto

4.	9225 North Haven 4922 N. Haven Dr. N.W. Calgary T2K 2K2	D.W. Dyer 016	1-6	24 Mrs. Dorey 27 Mrs. Roberts 10 Mrs. Franklin 2-3
1.	9350 Dr. Gladys McKelvie Egbert 6033 Madigan Dr. N.E. Calgary T2A 5G9	M. Dutnall 016	1-6	97 Open area - no classroom breakdown
2.	9240 Dalhousie 4440 Dallyn St. N.W. Calgary T3A 1K3	W. Rybachuk 024	1-6	24 Mrs. Pritchard 26 Mrs. Utigard 26 Mrs. Cavanaugh 25 Miss Campbell
3.	9357 West Dover 3113 - 30 Ave., S.E. Calgary T2A 2G4	J.W. Gamble 023	1-6	30 Mrs. Lebaron 30 Mrs. Gordon 29 Mrs. Gablehouse
4.	9241 Marion Carson 5225 Varsity Dr. N.W. Calgary T3A 1A7	G.J. Sackman 026	1-6	96 Open area - 3.5 teachers
1.	9644 Ernest Morrow Elem. Jr. High 1212 - 47 St. S.E. Calgary T2A 1R3	J.H. Schellenberg 046	1-9	1 Mrs. Preston 1-2-3 26 Mrs. Bodnar 2-3 6 Mrs. Mark 3-4
	Schools = 14			Students = 765 Teachers = 30
*2.	8503 Holy Family 904 - 32 St. S.E. Calgary T2A 0Z1	W. Hanishewski 007	K6	13 R. Poulet
3.	8529 St. William 11020 Fairmount Dr.S.E. Calgary T2J 0T1	M. Verhagen 010	K6	18 M. Walker 2-3 20 R. O'Neill 3-4
4.	8513 St. Cecilia Elem. 610 Agate Cres. S.E. Calgary T2J 0Z3	P. Coldham 014	K6	17 Mrs. O. Sage 2-3 27 Miss A Luca 3
1.	8718 St. Peter 108 - 22 St. N.W. Calgary T2N 2M8	R. Wilkins 011	1-9	13 Mrs. D. Early 3-4
2.	8719 St. Stephen 10910 Elbow Dr. S.E. Calgary T2W 1G6	G. Krupa 027	K9	8 Mrs. J. MacKay 2-3 29 Miss N. Lodding 3
	Schools = 5			Students = 145 Teachers = 7

3. 8035 St. William 13415 - 60 Street Edmonton T5A 0S7	Mrs. M. Poulsen 003	1-3	10 M. Poulsen
4. 8047 St. Maria Goretti 4210 - 127 Avenue Edmonton T5A 3K6	M.G. Mochulski 008	K5	29 Mrs. Duroni) Mrs. Clarke)
1. 8017 St. Bernard 7211 - 96A Avenue Edmonton T6B 1B5	K.J. Gurski 007	1-6	12 Mrs. Lee
2. 8038 St. Augustine 3808 - 106 Street Edmonton T5E 3G7	Sr. Mary V. Carey 013	K6	20 A. Predy 21 S. Sapieha
3. 8033 St. Thomas Aquinas 8527 - 91 Street Edmonton T6C 3N1	N.E. Normandeau 016	K6	21 Mrs. L. Amiotte 23 Mrs. Cruickshank
4. 8212 St. Catherine 10915 - 110 Street Edmonton T5H 3G3	R.H. Chyzowski 016	1-9	20 Mrs. Prestoash
1. 8206 Sacred Heart 9624 - 108 Avenue Edmonton T5H 1A4	M.A. Viebrugge 028	K9	27 Mrs. Romanchuk 27 Mrs. O'Callaghan
Schools = 7			Students = 210 Teachers = 11
CUMULATIVE TOTALS SCHOOLS = 26			STUDENTS = 1120 TEACHERS = 48

CODE 2

OTHER CITIES

2. 6846 Earl Kitchener 211 - 4 Street S.E. Medicine Hat T1A 0J9	E. Sailer 006	1-4	17 Mrs. N. Nawak
3. 4445 Mountview 4331 - 34 Street Red Deer T4N 0N9	R. Pettibone 008	1-6	27 D. Bower

4.	#6872 St. Louis Balmoral & Allowance SE Medicine Hat T1A 0W9	E. Butcher 007	1-6	15 E. Garrecht 8 A. Hagel
1.	#4438 Central Elem. 5205 - 48 Avenue Red Deer T4N 3T7	A. Lougheed 013	1-6	18 Mrs. Niemi
2.	#6435 Agnes Davidson 2103 - 20 Street S. Lethbridge T1K 2G7	K. R. Fisher 019	1-6	29 Mrs. W. Melrose 27 Mrs. M. Young
3.	#1143 Hillside 9410 - 106 Avenue Grande Prairie T8V 1H8	H. Intscher 023	K6	22 Heather Hachey 22 Gerhart Richter 22 Geraldine Kerschfaumer
	Schools = 6			Students = 207 Teachers = 10

CODE 3

SCHOOL DIVISIONS AND COUNTIES

2.	#2017 Bryan Box 30 Robb T0E 1X0	G. Conger 02	K6	5 Mrs. M. Abell
3.	#1301 Blueberry Site 1, R.R. 1 Spirit River T0H 3G0	R. Rymhs 05	K8	7 Helen MacDonald) Grace Sadownik)
4.	#2815 Lafond Lafond T0A 2G0	F. Hinz 04	K9	5 Mrs. L. Kwiatowski
1.	#5710 Verdant Valley Hutterite Colony Box 2317 Drumheller T0J 0X0	B. Giles 01	1-6	2 B. Giles
2.	#6906 Etzikom Box 526 Etzikom T0K 0W0	H.W. Street 02	1-6	3 Mrs. E. Street
3.	#3615 Pleasant Ridge Colony Lavoy T0B 2S0	Miss M. Kracher 0i	1-6	6 M. Kracher

*4.	2707 Rich Lake Rich Lake T0A 2C0	W.J. Maceachern 03	1-7	9 Frances Poelen
1.	6219 Riverside Colony Fort MacLeod T0L 0Z0	Mrs. Thora Daines 01	1-8	2 Thora Daines
2.	6126 Waldron Spring Point Colony Spring Point T0K 1W0	Karen Wesenberg 02	1-8	5 Karen Wesenberg
3.	1612 Langlois Guy T0H 1Y0	Paul Sequin 05	1-8	6 Ernest Chauvet
4.	5407 Mossleigh Mossleigh T0L 1P0	E. Dworak 05	1-8	7 Mrs. J. Forrestal
1.	6909 Rosedale Hutterite Colony, Box 569 Etzikom T0K 0W0	Miss J. Joslin 01	1-8	3 J. Joslin
2.	3218 Lindale Lindale T0C 1W0	Steven VanDiest 05	1-8	20 Arlene VanDiest
**3.	6221 Standoff Colony Cardston T0K 0K0	R.L. Nelson		0
4.	6313 Ewelme Colony Box 250 Fort MacLeod T0L 0Z0	G. Cote 01	1-9	5 G. Cote
1.	1401 Bear Canyon Central Bear Canyon T0H 0B0	C.E. Lee 03	1-9	2 Mrs. G. Carlstad
2.	1104 Elmsworth Elmsworth T0H 1J0	T. Brown 05	1-9	10 Mrs. J. Pringnitz
3.	3512 Holden Colony Ryley T0B 4A0	Mrs. E. Hammer 01	1-9	4 E. Hammer
4.	3332 Castle R.R. 2 Fort Saskatchewan T3L 2N8	K. Hiob 01	1-9	4 K. Hiob
1.	4713 South Bend Colony Alliance T0B 0A0	R. Ramcharen 02	1-9	7 R. Ramcharan
2.	3308 Ellerslie Primary R.R. 1, South Edmonton T6H 4N6	Miss D. Brosseau 06	K4	27 Mrs. C. Chapman

*3.	2622 Radway Radway T0A 2V0	J. Topolinsky		10 S. Christensen
4.	6609 L.T. Westlake Taber T0K 2G0	E. Meyer 07	1-6	14 Vivian Fawns
1.	3203 Breton Breton T0C 0P0	C.F. Landgraf 09	1-6	27 Mike Cochrane
*2.	4407 Penhold Box 130 Penhold T0M 1B0	Mrs. A. Neilson 01	1-9	17 Mrs. G. Bulmar
3.	5307 Millarville Millarville T0L 1K0	D. Green 08	1-9	22 Mrs. Thomson) Miss Alice Avery)
4.	5401 Arrowwood Box 180 Arrowwood T0L 0N0	G.T. Jopling 07	1-9	8 Mrs. L. Gooch
1.	4607 Gadsby Gadsby T0C 1K0	D. Thomas 06	1-9	8 D. Thomas
2.	3802 Clandonald Clandonald T0B 0X0	B. Prediger 08	1-9	14 Mrs. Martha Osinchuk) Mrs. Carolyn DeFord)
3.	4603 Byemore Box 40 Byemore T0J 0L0	H. Gridley 06	K10	7 Mrs. D. McCrindle) Mrs. N. Bunting)
4.	3803 Dewberry Dewberry T0B 1G0	C. Oullette 09	1-12	14 Mrs. Jean Vivian
1.	3305 Colchester Box 57, R.R. 2 South Edmonton T6C 4E6	G.M. Butner 015	K6	27 Mrs. Sue Tuli 12 Miss Helen Terhorst
*2.	1605 Girouxville Girouxville T0H 1S0	Rene St. Andre 013	K9	18 Mrs. S. Dusseault
3.	5411 Hazel Cameron Vulcan T0L 2B0	D. Olson 014	1-6	23 Miss D. Boucher 21 Mrs. F. Matlock
4.	2402 Eleanor Hall Clyde T0G 0P0	E. Pearce 013	1-9	29 Mrs. Bomersback
1.	4304 Blackfalds Blackfalds T0M 0J0	W.F. Naumenko 013	1-9	21 Mrs. P. Watson

2.	2804 Heinsburg Heinsburg T0A 1X0	L. Wilson 012	K12	16 Mrs. M. Lorenson
3.	5214 Kathryn Kathryn T0M 1E0	N. J. Minor 014	1-12	17 Mrs. K. Rambow
4.	4502 Bashaw Box 100 Bashaw T0B 0H0	D.L. Bennett 015	1-12	31 Mrs. Wilma Luft
1.	3325 Campbelltown 271 Conifer Street Sherwood Park T8A 1M4	W. Werstiuk 018	K6	31 Mrs. Leona Murphy 13 Mrs. Irene Langton
*2.	1514 Springfield Box 574 Peace River T0H 2X0	M.E. Sherris 020	1-3	27 Mrs. C. Arkinstall 22 Mrs. Bernice Roski 28 Mrs. Irene Gordey 16 Mrs. Maureen Imcrault
3.	2625 Thorhild Box 280 Thorhild T0A 3S0	D. Shelenko 018	1-8	30 Mrs. L. Onyschuk
4.	4802 Consort Consort T0C 1B0	K. Lorenz 019	1-12	27 Mrs. Bernice Fawcett
1.	4301 Macc-Alix Box 160 Alix T0C 0R0	R.A. Butler 018	1-12	16 Mr. William Clark
2.	3910 Wainwright Wainwright T0R 4P0	F.W. Lee 024	K6	28 Mrs. Margaret Pioker 28 Miss Audrey Lampitt
3.	1207 Harry Gray Box 869 Valleyview T0H 3N0	Mike Monkman 022	1-6	26 Mrs. Barb Evers 24 Miss B. Fleet 25 Mrs. M. Tackaberry
4.	3302 Ardrossan Ardrossan T0B 0E0	N. Horne 024	3-6	28 Miss P. Kehlert 27 Mrs. L. Ahlstrom 28 Mrs. Eileen Roberts 27 Mrs. Marianne Paetkau
1.	6702 Bassano Box 60 Bassano T0J 0B0	J. Macdonell 021	1-12	21 Mrs. M. Barlow
2.	4207 Ponoka Box 790 Ponoka T0C 2H0	L. Bowman 029	K6	27 Mrs. G. Billey & Mrs. Mrs. D. Bossenberry 27 Miss A. Lewis & Mrs. M. Sorensen 29 Mrs. C. Tennant 20 Mrs. A. Rice

3.	2213 Winterburn Winterburn TOE 2NO	J. S. Hrasko 027	1-9	25 Mrs. B. McEachern 10 Mrs. C. Hitchcock
4.	4824 Coronation Coronation TOC 1CO	J. Taylor 028	1-12	28 Mrs. M. Merchant
1.	1108 Sexsmith Box 39 Sexsmith TOH 3CO	E. J. Meen 032	1-12	28 Miss N. Boyd

Schools = 52

Students = 1,598
Teachers = 93

CODE

INDEPENDENTS

1.	5240 Seebe Seebe TOL OM0	C. C. Dick 01	1-6	2 C. Dick
2.	1570 Holy Family Box 257 Grimshaw TOH 1WO	M. Vienneau 09	1-9	21 Miss P. Baay
3.	3671 St. Mary's Box 46 Vegreville TOB 4LO	M. Tomyn 07	K6	17 Mrs. E. Mudryk
4.	6671 St. Patrick's Box 1288 Taber TOK 2GO	C. D. Wentz 014	1-6	28 M. Timmitt
1.	6535 Stirling Box 340 Stirling TOK 2EO	J. A. Stevenson 011	1-12	15 J. Hillyer
2.	2038 Our Lady of Angels 9622 Sheridan Drive Ft. Sask. T8L 1W7	R. Hlady 017	K9	25 D. Holt
3.	2335 Swan Hills Swan Hills TOG 0EO	D. A. Seebach 023	K9	25 Lois Melville 24 Elizabeth Mills
4.	1470 St. Thomas More Box 2245 Fairview TOH 1LO	N.J. Blackovits 024	1-12	23 Mrs. F. Chateau

1. 2578 Vital Grandin 39 Sunset Blvd. St. Albert T8N 0N6	A. Perrott 031	1-6	28 Mrs. A. Code 28 Mrs. J. Desroches 26 Mrs. C. Hopkins

Schools = 9

Students = 242
Teachers = 11

CUMULATIVE TOTALS
Schools = 93

STUDENTS = 3,167
TEACHERS = 162

* Schools which were alternates for the following reasons:

Holy Family - The Grade III teacher of the school originally chosen was on extended sick leave.

Rich Lake - The school originally approached was a "sawmill school" and was closed.

Radway - The Superintendent of the school originally chosen requested it not be included because the students entered Grade I unable to speak English.

Penhold - The Superintendent of the school originally approached asked to be relieved because the administrative unit had just completed a heavy testing program.

Girouxville - The Superintendent of the school originally chosen requested it not be included because the students entered Grade I unable to speak English.

Springfield - The school originally contacted declined to participate.

** Schools in the sample with zero Grade III population:

Standoff Colony

APPENDIX 5

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

ALBERTA GRADE III ACHIEVEMENT STUDY

INFORMATION FOR PRINCIPALS AND TEACHERS OF GRADE III STUDENTS

I. CONTENTS

*Each package contains one test for each student enrolled according to the information received from the superintendent and/or you, plus one extra test of each kind in case an increase in enrollment occurs.

*Stamped with a red stamp for the teacher to mark items deemed inappropriate, each package contains one extra test of types A_L (latest version of Gates-MacGinitie reading tests, 1964), B_L and C_L (latest version of California Achievement Test battery, 1970), and A_o (original version of Gates reading tests).

*Sufficient tests for the principal of type D_L (latest version of California Mental Maturity Test, 1962) for each Grade III student, plus one extra for each class in case an increase in enrollment occurs.

*Directions for administering the tests.

II. INSTRUCTIONS

*Your school is in Group 1 (as explained in the copy of the letter to the superintendent).

*The achievement tests to be administered by the Grade III teacher(s) are as follows:

A_L The latest (1964) version of the Gates-MacGinitie reading tests (general and detailed directions are on stapled canary-colored sheets). Testing time about 50 minutes. To be administered on the morning of May 18 (if the tests arrive in time!). Please be sure that the student's age and birth date (day and year) are correctly recorded as we must have this information accurate. Please have students circle their last name, which will help us collate the various tests written by the same student.

B_L and C_L The latest (1970) version of the California Achievement Tests, complete battery, READING, MATHEMATICS, and LANGUAGE (general and detailed directions are on stapled green sheets). Testing time for Reading 40 minutes, Mathematics 48 minutes and Language 35 minutes. The testing should be started first thing in the morning, allowing for a break between reading and mathematics, and another between arithmetic and language. To be administered the day after the Gates-MacGinitie reading tests.

A_o The original Gates Word Recognition and Gates Paragraph Meaning tests (general directions are on the canary-colored sheet, detailed instructions are on the front page of the test booklet). Testing time about 40 minutes. To be administered in the morning of the day following the administration of the California Achievement Tests.

D_L The principal, or designee, administers the latest version of the California Mental Maturity Tests (general and detailed directions are on stapled green sheets). Testing time about 42 minutes. To be administered on the morning after the achievement tests are administered. (Note: in one-room schools the teacher administers this test).

III. RETURN OF THE TESTS

As soon as all of the tests have been administered, they should be packaged and returned to S.C.T. Clarke, 4-107, Education II, The University of Alberta, Edmonton. Within the package, please parcel the tests by teacher: all of the tests taken by students in any class plus the tests used by the teacher to mark inappropriate items together in one parcel. This will facilitate our identification and collation of the different tests written by each student. Please return any unused tests.

APPENDIX 6

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

ALBERTA GRADE III ACHIEVEMENT STUDY

INFORMATION FOR PRINCIPALS AND TEACHERS OF GRADE III STUDENTS

I. CONTENTS

*Each package contains one test for each student enrolled according to the information received from the superintendent and/or you, plus one extra test of each kind in case an increase in enrollment occurs.

*Stamped with a red stamp for the teacher to mark items deemed inappropriate, each package contains one extra test of types A_L (latest version of Gates-MacGinitie reading tests, 1964), B_L and C_L (latest version of California Achievement Test battery, 1970), and B_O (original version of Reading and Language tests in the California Achievement Test battery, 1950).

*Sufficient tests for the principal of Type D_L (latest version of California Mental Maturity Test, 1963) for each Grade III student, plus one extra for each class in case an increase in enrollment occurs.

*Directions for administering the tests.

II. INSTRUCTIONS

*Your school is in Group 2 (as explained in the copy of the letter to the superintendent).

*The achievement tests to be administered by the Grade III teacher(s) are as follows:

A_L The latest (1964) version of the Gates-MacGinitie reading tests (general and detailed directions are on stapled canary-colored sheets). Testing time about 50 minutes. To be administered on the morning of May 18 (if the tests arrive in time!). Please be sure that the student's age and birth date (day and year) are correctly recorded as we must have this information accurate. Please have students circle their last name, which will help us collate the various tests written by the same student.

B_L and C_L The latest (1970) version of the California Achievement Tests, complete battery, READING, MATHEMATICS, and LANGUAGE, (general and detailed directions are on stapled green sheets). Testing time for Reading 40 minutes, Mathematics 48 minutes and Language 35 minutes. The testing should be started first thing in the morning, allowing for a break between reading and mathematics, and another between arithmetic and language. To be administered the day after the Gates-MacGinitie reading tests.

B_o The original (1950) version of the California Achievement Tests, complete battery (general and detailed directions are on stapled canary-colored sheets). Administer only the READING AND LANGUAGE parts. Do not administer the ARITHMETIC part. Testing time for Reading 29 minutes, and for Language 16 minutes. To be administered the day after B_L and C_L.

D_L The principal, or designee, administers the latest version of the California Mental Maturity Tests (general and detailed directions are on stapled green sheets). Testing time about 42 minutes. To be administered on the morning after the achievement tests are administered. (Note: in one-room schools the teacher administers this test).

III. RETURN OF THE TESTS

As soon as all of the tests have been administered, they should be packaged and returned to S.C.T. Clarke, 4-107, Education II, The University of Alberta, Edmonton. Within the package, please parcel the tests by teacher: all of the tests taken by students in any class plus the tests used by the teacher to mark inappropriate items together in one parcel. This will facilitate our identification and collation of the different tests written by each student. Please return any unused tests.

APPENDIX 7

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

ALBERTA GRADE III ACHIEVEMENT STUDY

INFORMATION FOR PRINCIPALS AND TEACHERS OF GRADE III STUDENTS

I. CONTENTS

*Each package contains one test for each student enrolled according to the information received from the superintendent and/or you, plus one extra test of each kind in case an increase in enrollment occurs.

*Stamped with a red stamp for the teacher to mark items deemed inappropriate, each package contains one extra test of types A_L (latest version of Gates-MacGinitie reading tests, 1964), B_L and C_L (latest version of California Achievement Test battery 1970), and C_O (original version of Mathematics Test in the California Achievement Test battery, 1950).

*Sufficient tests for the principal of type D_L (latest version of California Mental Maturity Test, 1963) for each Grade III student, plus one extra for each class in case an increase in enrollment occurs.

*Directions for administering the tests.

II. INSTRUCTIONS

*Your school is Group 3 (as explained in the copy of the letter to the superintendent).

*The achievement tests to be administered by the Grade III teacher(s) are as follows:

A_L The latest (1964) version of the Gates-MacGinitie reading tests (general and detailed directions are on stapled canary-colored sheets). Testing time about 50 minutes. To be administered on the morning of May 18 (if the tests arrive in time!). Please be sure that the student's name and birth date (day and year) are correctly recorded as we must have this information accurate. Please have students circle their last name, which will help us collate the various tests written by the same student.

B_L and C_L The latest (1970) version of the California Achievement Tests, complete battery, READING, MATHEMATICS, and LANGUAGE (general and detailed directions are on stapled green sheets). Testing time for Reading 40 minutes, Mathematics 48 minutes and Language 35 minutes. The testing should be started first thing in the morning, allowing for a break between reading and mathematics, and another between arithmetic and language. To be administered the day after the Gates-MacGinitie reading tests.

C_o The original (1950) version of the California Achievement Tests, complete battery (general and detailed directions are on stapled canary-colored sheets). Administer only the ARITHMETIC part. Do not administer the READING and LANGUAGE parts. Testing time about 50 minutes. To be administered the day after B_L and C_L.

D_L The principal, or designee, administers the latest version of the California Mental Maturity Tests (general and detailed directions are on stapled green sheets). Testing time about 42 minutes. To be administered on the morning after the achievement tests are administered. (Note: in one-room schools the teacher administers this test).

III. RETURN OF THE TESTS

As soon as all of the tests have been administered, they should be packaged and returned to S.C.T. Clarke, 4-107, Education II, The University of Alberta, Edmonton. Within the package, please parcel the tests by teacher: all of the tests taken by students in any class plus the tests used by the teacher to mark inappropriate items together in one parcel. This will facilitate our identification and collation of the different tests written by each student. Please return any unused tests.

APPENDIX 8

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

ALBERTA GRADE III ACHIEVEMENT STUDY

INFORMATION FOR PRINCIPALS AND TEACHERS OF GRADE III STUDENTS

I. CONTENTS

*Each package contains one test for each student enrolled according to the information received from the superintendent and/or you, plus one extra test of each kind in case an increase in enrollment occurs.

*Stamped with a red stamp for the teacher to mark items deemed inappropriate, each package contains one extra tests of types A_L (latest version of Gates-MacGinitie reading tests, 1964,), B_L and C_L (latest version of California Achievement Test battery, 1970).

*Sufficient tests for the principal of type D (original version of the California Mental Maturity Test, 1953) and D_L (latest version of California Mental Maturity Test, 1963) for each Grade III student, plus one extra for each class in case an increase in enrollment occurs.

*Directions for administering the tests.

II. INSTRUCTIONS

*Your school is in Group 4 (as explained in the copy of the letter to the superintendent).

*The achievement tests to be administered by the Grade III teacher(s) are as follows:

A_L The latest (1964) version of the Gates-MacGinitie reading tests (general and detailed directions are on stapled canary-colored sheets). Testing time about 50 minutes. To be administered on the morning of May 18 (if the tests arrive in time!). Please be sure that the student's age and birth date (day and year) are correctly recorded as we must have this information accurate. Please have students circle their last name, which will help us collate the various tests written by the same student.

B_L and C_L The latest (1970) version of the California Achievement Tests, complete battery, READING, MATHEMATICS, and LANGUAGE (general and detailed directions are on stapled green sheets). Testing time for Reading 40 minutes, Mathematics 48 minutes and Language 35 minutes. The testing should be started first thing in the morning, allowing for a break between reading and mathematics, and another between arithmetic and language. To be administered the day after the Gates-MacGinitie reading tests.

*The mental ability tests to be administered by the principal or designee as as follows:

D_O The original (1953) version of the California Mental Maturity tests (general and detailed directions are on stapled canary-colored sheets). Testing time about 42 minutes. To be administered on the morning after the achievement tests are administered. (Note: in one-room schools the teacher administers this test).

D_L The latest (1963) version of the California Mental Maturity tests (general and detailed directions are on stapled green sheets). Testing time about 42 minutes. To be administered on the next morning. (Note: in one-room schools the teacher administers this test).

III. RETURN OF THE TESTS

As soon as all of the tests have been administered, they should be packaged and returned to S.C.T. Clarke, 4-107 Education II, The University of Alberta, Edmonton. Within the package, please parcel the tests by teacher: all of the tests taken by students in any class plus the tests used by the teacher to mark inappropriate items together in one parcel. This will facilitate our identification and collation of the different tests written by each student. Please return any unused tests.

SPECIAL SESSIONS
4-107 EDUCATION II

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

APPENDIX 9

Dear Principal and Teacher(s) of Grade III Students,

Today we mailed to you the tests for the study. We hope that they arrive promptly, but realize that the mails are sometimes erratic. The package contains complete instructions for administering the tests. If your package arrives after the suggested dates for their administration, please proceed to give them as soon as is convenient.

It is suggested that you retain the packages for the return of the tests. For your convenience, a gummed addressed label is enclosed. The required postage is also enclosed.

In connection with the Grade III teacher(s) professional opinion about inappropriate items, this is to be independent of the administration of the tests; i.e. the students attempt all items. Later, after teacher consensus has been ascertained, items deemed inappropriate will be eliminated from the comparisons.

The exact age of students is required for the study. It is important, therefore, that the age in years be given on <u>each test</u> where it is requested, and also that the <u>year</u>, <u>month</u> and <u>day</u> of birth be given <u>each time</u> it is called for. Some pupils might need help in ascertaining the year of birth. Also, we request that they circle their surname to assist us in collating the five different tests written by each student.

Your willingness to participate, and the time and effort devoted by you and your students, is deeply appreciated. Thank you.

Very sincerely yours,

S.C.T. Clarke, Director, Special Sessions
V. Nyberg, Department of Psychology
W. H. Worth, Dean, Faculty of Education

APPENDIX 10

EDMONTON GRADE III ACHIEVEMENT: 1956 - 1977 COMPARISONS

ABSTRACT

This study of third grade achievement in Edmonton public schools was funded under contract by the Planning and Research Branch, Alberta Education. The primary purpose (of the study) was to compare achievement in some of the basic skills over an extended time period. The study was made possible by the fact that an extensive testing program essentially for norming purposes had been carried out in Edmonton in spring, 1956, and that the original test booklets had been retained.

The research procedure was simply to repeat, in spring 1977, the testing done in 1956 and to compare results.

In May and early June of 1956 the following tests were administered.

1. Gates Word Recognition
2. Gates Paragraph Reading
3. California Achievement Reading
4. California Achievement Arithmetic
5. California Achievement Language
6. California Test of Mental Maturity

All of these tests were out of print, so permission was obtained from the publishers to reprint them for use in the 1977 study.

The testing conditions that prevailed in 1956 were duplicated in 1977 as far as possible; that is, all of the grade three pupils in the Edmonton public schools were tested, the time of year was the same, and the testing was carried out by teachers and university students. Scoring standards were uniform for both groups of pupils because the 1956 tests were re-scored at the time that the 1977 booklets were marked.

In order to ensure that the tests would be appropriate for use in 1977 they were submitted to school supervisory staff, to curriculum experts at the University of Alberta, and to the classroom teachers. A group of items judged inappropriate was identified. Although students wrote the complete

test the main comparisons were based on scores on tests from which the unsuitable items had been deleted.

Results of the comparisons indicated as follows:

1. Means for the Gates Word Recognition Test were 35.35 for the 1956 group and 37.41 for the 1977 group, an increase of 2.06.
2. Means for the Gates Paragraph Reading Test were 22.27 for the 1956 group and 22.66, an increase of .39.
3. Means for the California Reading tests were 75.26 for 1956 and 77.58 for 1977, an increase of 2.32.
4. Means for the California Arithmetic test were 55.98 for 1956 and 55.56 for 1977, a decrease of .42.
5. Means for the California Language test were 24.24 for 1956 and 25.41 for 1977, an increase of 1.17.

Further analyses were carried out on age and mental ability. With respect to age, the 1977 students were, on the average, 1.72 months younger than the 1956 students. Boys averaged 1.96 months younger and the girls 1.57 months younger in 1977. Scores on the California Test of Mental Maturity averaged 4.03 points higher in 1977 than in 1956.

Removal of items deemed inappropriate for the 1977 group of pupils was an insignificant factor in all of the areas tested with the exception of arithmetic. This would indicate that there has been a larger shift in the mathematics curriculum than in the curricula for language and reading.

Results of the study indicated that for third grade pupils in Edmonton, achievement in reading and language in 1977 was generally as good as or better than achievement in 1956, despite the fact that the 1977 group was, on the average, younger than the 1956 group.

APPENDIX 11

ALBERTA GRADE III ACHIEVEMENT NORMS

Based on the Study

ALBERTA GRADE III ACHIEVEMENT

Conducted by

S. C. T. Clarke, V. Nyberg, W. H. Worth

of

The University of Alberta

for

The Alberta Advisory Committee on Educational Studies

Under Contract to

Alberta Education, Edmonton, Alberta, Canada

Commissioned by

The Minister's Advisory Committee on Student Achievement

The data on which these norms were based were collected at the end of May, 1977 from a representative ten percent sample of Alberta schools with Grade III classrooms.

ADVISORY COMMITTEE FOR THE STUDY

J. Anderson	A.S.T.A.
W. Brooks	A.T.A.
A. Myhre	C.A.S.S.
H. C. Rhodes	Alta. Ed. (Chm.)
H. Sherk	Alta. Ed.

PLANNING AND RESEARCH

ALBERTA EDUCATION

NOVEMBER, 1978

ALBERTA GRADE III PERCENTILE NORMS

GATES McGINITIE READING TESTS

VOCABULARY

1964 Edition

Based on a Sample of 2998 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 14	less than .5	34	28
15 - 18	1	35	31
19	2	36	36
20	2	37	40
21	3	38	45
22	4	39	50
23	5	40	56
24	6	41	61
25	7	42	68
26	9	43	74
27	10	44	80
28	12	45	80
29	14	46	89
30	16	47	92
31	18	48	95
32	21	49	97
33	24	50 - 52	99 or greater

ALBERTA GRADE III PERCENTILE NORMS

GATES McGINITIE READING TESTS

COMPREHENSION

1964 Edition

Based on a Sample of 2998 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 9	less than .5	29	30
10	1	30	33
11	2	31	36
12	2	32	39
13	3	33	43
14	4	34	46
15	5	35	51
16	6	36	55
17	8	37	59
18	9	38	63
19	10	39	68
20	12	40	72
21	14	41	77
22	15	42	81
23	17	43	85
24	19	44	90
25	21	45	93
26	23	46	97
27	25	47	99
28	28	48	greater than 99

ALBERTA GRADE III PERCENTILE NORMS

CALIFORNIA ACHIEVEMENT TESTS

READING

1970 Edition

Based on a Sample of 2983 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 30	less than .5	60	13
31 - 35	1	61	14
36	2	62	15
37	2	63	16
38	2	64	17
39	3	65	18
40	3	66	20
41	4	67	21
42	4	68	24
43	4	69	26
44	4	70	29
45	4	71	31
46	5	72	34
47	5	73	38
48	5	74	42
49	6	75	46
50	6	76	52
51	7	77	58
52	7	78	64
53	8	79	70
54	8	80	77
55	9	81	84
56	10	82	90
57	10	83	95
58	11	84	98
59	12	85	greater than 99.5

ALBERTA GRADE III PERCENTILE NORMS

CALIFORNIA ACHIEVEMENT TESTS

MATHEMATICS

1970 Edition

Based on a Sample of 2995 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 39	less than .5	86	19
40 - 49	1	87	20
50 - 55	2	88	22
56 - 59	3	89	23
60	4	90	25
61	4	91	26
62	4	92	28
63	5	93	30
64	5	94	32
65	6	95	34
66	6	96	36
67	7	97	38
68	7	98	40
69	8	99	43
70	8	100	45
71	8	101	48
72	9	102	51
73	9	103	54
74	10	104	58
75	11	105	62
76	11	106	66
77	12	107	70
78	12	108	74
79	13	109	78
80	14	110	82
81	14	111	87
82	15	112	91
83	16	113	94
84	17	114	97
85	18	115 - 116	99 or greater

ALBERTA GRADE III PERCENTILE NORMS

CALIFORNIA ACHIEVEMENT TESTS

LANGUAGE

1970 Edition

Based on a Sample of 2938 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 28	less than .5	72	23
29 - 36	1	73	24
37 - 40	2	74	26
41 - 43	3	75	27
44 - 47	4	76	28
48	5	77	29
49	5	78	30
50	6	79	32
51	6	80	33
52	7	81	35
53	8	82	36
54	8	83	38
55	9	84	39
56	10	85	41
57	10	86	42
58	11	87	43
59	12	88	45
60	12	89	46
61	13	90	48
62	14	91	50
63	14	92	51
64	15	93	52
65	16	94	54
66	17	95	56
67	18	96	57
68	20	97	52
69	21	98	36
70	21	99	34
71	22	100	41

ALBERTA GRADE III PERCENTILE NORMS

CALIFORNIA ACHIEVEMENT TESTS

LANGUAGE (continued)

1970 Edition

Based on a Sample of 2938 Students

Score	Percentile Rank	Score	Percentile Rank
101	64	123	89
102	66	124	90
103	67	125	91
104	69	126	92
105	70	127	93
106	71	128	93
107	73	129	94
108	74	130	94
109	76	131	95
110	77	132	96
111	78	133	96
112	79	134	97
113	80	135	97
114	81	136	98
115	82	137	98
116	83	138	98
117	84	139	98
118	85	140	98
119	86	141	99
120	87	142	99
121	88	143	99
122	89	144 - 147	99.5 or greater

ALBERTA GRADE III PERCENTILE NORMS

CALIFORNIA SHORT-FORM TEST OF MENTAL MATURITY

1962 Edition

Based on a Sample of 2975 Students

Score	Percentile Rank	Score	Percentile Rank
0 - 33	less than .5	71	39
34 - 39	1	72	42
40 - 42	2	73	45
43 - 45	3	74	48
46	4	75	52
47	4	76	55
48	5	77	58
49	6	78	62
50	6	79	65
51	7	80	68
52	8	81	71
53	8	82	74
54	9	83	77
55	10	84	80
56	11	85	83
57	12	86	85
58	13	87	88
59	15	88	90
60	16	89	92
61	18	90	93
62	19	91	95
63	21	92	96
64	23	93	97
65	25	94	98
66	27	95	99
67	29	96	99
68	32	97	99
69	34	98 - 101	99.5 or greater
70	37		